

GRAMMATICAL ENCODING OF EVENT RELATIONS:
GERUND PHRASES IN SPANISH

by

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ABBREVIATIONS USED

AP	Adjective Phrase
ATC	Adverbial Temporal Construction
CiS	Circumstance Sharing
e_M	Main Event (event described by the main clause)
e_G	Gerund Event (event described by the gerund phrase)
$\delta(e_M)$	Main Event Description
$\delta(e_G)$	Gerund Event Description
GP	Gerund Phrase
SGC	Spanish Gerund Construction
SGC _C	Complement Spanish Gerund Construction
SGC _A	Adjunct Spanish Gerund Construction
SGC _{A-ABS}	Adjunct Spanish Gerund Construction (Absolute Gerund Phrase)
SGC _{A-FREE}	Adjunct Spanish Gerund Construction (Free Adjunct Gerund Phrase)
SGC _{C-CIRC}	Complement Spanish Gerund Construction with sharing circumstance semantics.
SGC _{C-MEANS}	Complement Spanish Gerund Construction with an event overlap semantics.
SGC _{C-O}	Complement Spanish Gerund Construction with Object Controller
SGC _{C-S}	Complement Spanish Gerund Construction with Subject Controller
HPSG	Head Driven Phrase Structure Grammar
RRG	Role and Reference Grammar
SP	Secondary Predicates

ABSTRACT

This dissertation is a description of the grammatical properties of the Spanish Gerund Construction (SGC). There are two main kinds of SGC, SGC_C and SGC_A . The gerund phrase (GP) is a complement to the main verb in SGC_C and an adjunct in SGC_A ; the event description in GP denotes an event in a mereological relation to the main event in SGC_C but not in SGC_A ; finally, GP is the default Focus of the sentence in SGC_C but not in SGC_A .

The interface properties of SGC_C challenge the standard assumption about complements being lexically required constituents since GP is not lexically required while it behaves as a complement regarding extraction and reordering.

I argue that these (unexpected) structural properties of GP in SGC_C are consistent with its semantics: GP denotes a participant (i.e. an event) holding a mereological relation to the main event. Two kinds of mereological relations define the basic subtypes of SGC_C : ‘circumstance sharing’ or SGC_{C-CIRC} and ‘event overlapping’ or $SGC_{C-MEANS}$. SGC_{C-CIRC} requires the events denoted by GP and the main clause to share a ‘stage’ of an individual. $SGC_{C-MEANS}$ requires the events to share a subevent.

I also argue that $SGC_{C-MEANS}$ is characterized by an asymmetry. The gerund event description in $SGC_{C-MEANS}$ must be more specific in relation to the subevent that it shares with the main event description. I argue that this asymmetry is consistent with the status of GP as default Focus. Taking Manner as a cover term including circumstance sharing and Means, GP expresses information that is typically inferable; hence, it is only uttered if it cancels out an R-implicature such that it naturally becomes the Focus of the sentence.

CHAPTER I: INTRODUCTION

1. THE SPANISH GERUND CONSTRUCTION

This investigation presents a set of semantic categories and linking patterns in the semantics-pragmatics and the syntax-semantics interfaces that captures the fundamental properties of the Spanish Gerund Construction (SGC). These semantic categories involve different mereological relation among eventualities and much of the potential contribution of this thesis resides in the detailed description of the way those relations are instantiated in a set of related constructions.

The SGC has been a noticeable gap in the research in Spanish Linguistics. Fernandez Lagunilla (1999) represents an isolated attempt at describing the entire spectrum covered by SGC; however, her goal is solely descriptive. The different sub-constructions encompassed by SGC are determined on the basis of intuitive criteria and descriptive categories are not explicitly defined or cross-linguistically valid.

In contrast, the set of semantic, pragmatic and syntactic categories that determine the hierarchy of SGC subtypes proposed in this thesis are explicitly characterized and are drawn from a repertoire of concepts that are widely considered to be cross-linguistically valid. Categories such as those that constitute mereological structures or the concept of a stage predicate or I and R implicatures have been for quite some time part of the conceptual vocabulary in Semantics and Pragmatics. For the most part, this thesis makes use of well-established concepts; but it associates these concepts with a set of semantic restrictions that makes these semantic categories more revealing when applied to a SGC.

For example, the definition of ‘overlap’ is transparent: two entities ‘a’ and ‘b’ overlap iff there is a third entity ‘c’ that is part of both ‘a’ and ‘b’. The same definition applies to ‘event overlap’ if we replace ‘entity’ for ‘event’ (cf. Krifka 1998). The problem with this definition is, I argue, that it is not obvious how to decide whether a specific linguistic form describes overlapping or not. Neither is clear under which conditions two events overlap in the external world. Thus we have an abstract notion that can be precisely defined but that can only form part of a formal metalanguage.

A fairly large part of this thesis is devoted to the elucidation and definition of criteria can capture the meaning of SGC sentences. These semantic constraints are valid for SGC, but I also present some facts that suggest that the semantic conditions are indeed of cross-constructional and cross-linguistic relevance.

In studying the rather scarcely addressed linguistic domain of the gerund, descriptive generalizations played an important role. I have benefited from two corpora; the oral corporal of the Real Academia which can be consulted on-line, and the corpus of the Associated Press.

The Spanish Gerund Construction is a syntactic structure that consists of a finite main clause and a gerund phrase as it is illustrated below.

- (1) Todos los estudiantes salieron de la clase llevando un afiche.
All the students exited from the classroom carrying a flyer
‘Every student left the classroom carrying a flyer’

The gerund form in Spanish results from the combination of verbal stems and the bound morphem {-ando}/{-iendo}; gerunds in Spanish are verb forms; they can take subject, complements, perfect auxiliary and can be modified by adverbs. Gerunds in Spanish can be part of periphrastic verb forms (i.e. the progressive); they can also form phrases that

modify nouns just like a restrictive relative clause. Neither of these two structures are addressed in this thesis. This investigation only deals with gerund phrases that, as in (1), are embedded into a finite main clause; its descriptive goal is to identify the formal and semantic properties that determine the various subtypes formed by the combination of main clauses and gerund phrases, respectively.

Gerund forms are semantically ‘defective’ in two ways; they are non-finite and are aspectually imperfective. This means, first, that the temporal location of the event associated with each gerund event description is determined outside the syntactic domain of the gerund predicate. Second, it means that the event described by the gerund might be only partially presented; the endpoints of the event may not be part of the assertion.

In relation to the temporal location of the event, the gerund phrase is, hence, ‘dependent’ in a sense that the finite clause is not. This temporal dependency is consistent with the fact that since the gerund phrase is embedded in the main clause. The specific nature of this embedding is variable and is one of the decisive factors distinguishing the different subtypes of SGC.

Two major kinds of SGC are SGC_C –or ‘complement’ exemplified by sentence (1) above- and SGC_A –or ‘adjunct’ as represented by (2) below.

- (2) *Habiendo vendido Pedro la casa, sus sobrinas se quedaron sin vacaciones de verano.*
having sold Pedro the house, his nieces REF stayed without vacations of summer
‘Pedro having sold his house, his nieces were left without summer vacations’

The structural differences between SGC_C and SGC_A are numerous; they are exposed in detail in chapter II. First, the gerund phrase in SGC_C is an obligatory control construction; this means that it does not have an overtly expressed subject, which is semantically interpreted as coreferential with the subject of the main clause. In contrast, SGC_A may

have its own subject whose interpretation is not externally determined. Also, SGC_A separates the gerund phrase from the main clause by a pause (comma) whereas a pause is not acceptable in SGC_C. Further, SGC_C allows reordering and extraction out of the gerund clause whereas this is not possible in SGC_A. Finally, the gerund clause in SGC_C cannot host independent operators such as aspectual auxiliaries and adverbs of negation whereas this is possible for SGC_A. I propose in chapter II that all the phenomena listed above can be derived by assuming that the gerund phrase in SGC_C is a VP embedded into the main clause as a sister to V; namely, the gerund phrase is within the syntactic domain of complements of the main verb. In contrast, the gerund in SGC_A heads a clause –rather than a VP- that is adjoined to the main clause.

The primary semantic distinction between SGC_C and SGC_A resides in the fact that SGC_C encodes an *internal* relation between events whereas in SGC_A the event relation is *external*. An event relation is *internal* if it is defined over a subpart of at least one of the related events; in other words, an internal relation is a mereological relation between events. In (1) above the main clause is associated with the event description of the exiting event and the gerund phrase with the event description of carrying; both events are motion verbs and involve a path. The interpretation of (1) determines that the path, time interval, space, Figure (or self-moving entity) and, also, the Motion relation that relates them are all (at least partially) shared; for example, the path as that of the carrying event is at least in part the same path of the exiting event. This means that the relation between the events is defined with respect to their subparts, which motivates my use of the term *internal*.

In contrast, in example (2) above the being-left event is a direct consequence of the selling event expressed by the gerund clause. The sentence entails that the gerund event took place before the main event; in general, the relation of ‘consequence’ takes the events described by the main clause and the gerund phrase as units and relate them without regards to their internal structures. Hence, ‘consequence’ constitutes an *external* relation between two described events.

The description of SGC I propose in this thesis is to a large extent consistent with the functionalist principle that there exists a systematic relation between form and meaning. This pattern can be summed up in the following formula: the more parts the events described by the predicates share, the more dependent of the main clause the gerund phrase is. Event internal relations are associated with a syntax in which the embedded clause is highly dependent on the main clause whereas event external relations are expressed by a structure with highly independent clauses.

I further propose that SGC_C comprises two different constructions, namely, SGC_{C-SUB} or ‘subject control’ and SGC_{C-OBJ} or ‘object control’. In turn, SGC_{C-SUB} branches into two different subconstructions: SGC_{C-MEANS} and SGC_{C-CIRC}. The property that characterizes SGC_{C-MEANS} is illustrated in sentence (1). It indicates that the events encoded by the main and the gerund phrases overlap; there is a subevent that is both part of the main event and the gerund event. A subtype of SGC_{C-MEANS} is SGC_{C-CAUSE}, which encodes an event overlapping relation between in which a causal relation is introduced by the main verb.

- (3) Este tipo asustó al niño gritando.
 this guy scared to-the kid screaming
 ‘This guy scared the kid by screaming’

The verb *asustar* introduces a causal relation; it entails a change of (psychological) state caused by an eventuality (state or event) that has the participant expressed as subject as its effector/agent. The kind of causing eventuality involved remains unspecified by the main verb; it is specified by the gerund event description. The gerund event is a subpart of the main event; and their interrelation is determined by the main verb.

SGC_{C-CIRC} as represented in sentence (4) involves a weaker relation between events than event overlapping which characterizes SGC_{C-MEANS}.

- (4) Las niñas fueron a Toronto cantando Manuelita todo el viaje.
The girls went to Toronto singing Manuelita all the trip
‘The girls went to Toronto singing Manuelita the whole way’

In SGC_{C-CIRC} the events share a participant (i.e. las niñas) and a spatio-temporal circumstance. Unlike SGC_{C-MEANS}, there is no subevent sharing since the two events belong to two different categories, Motion events and Sound Emission events respectively. However, there is more than simply sharing individual components of the event since they share a participant in relation to the same spatio-temporal circumstance; namely, they share a ‘stage’ of a participant. This is what I call ‘Circumstance Sharing’, which is proposed as the meaning of SGC_{C-CIRC}.

SGC_{C-O} is an object obligatory control structure represented by sentences like (5) below.

- (5) Juan encontró a María llorando.
Juan found to Mary crying
‘Juan found Mary crying’

The Actor of the gerund event description is coreferential with a participant expressed as direct object of the main clause. The semantics of (5) mirrors that of SGC_{C-CIRC} in that the two events share a circumstantial relation between participants (a participant in relation to

a spatio-temporal circumstance). SGC_{C-O} can also express ‘means’ relations as shown below.

- (6) Juan sacó la caja del garage arrastrandola.
 Juan took-out the box from-the lugging-it
 ‘Juan lugged the box out of the garage’

The gerund phrase describes an event that contains a path traversed by a participant in a Motion relation and, the path and the participant plus the relation among them are shared with the main event. Therefore, the two events overlap in a relation that has been labeled ‘Means’.

The various kinds of SGC_C I describe in this thesis are represented in figure 1 below in terms of hyponymy relations.

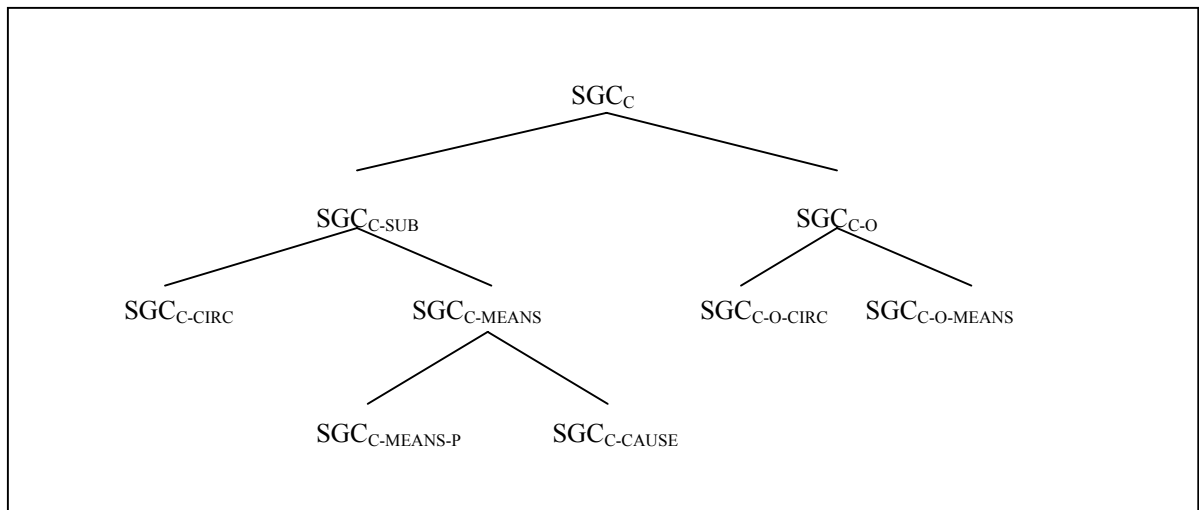


Figure 1

The subtype SGC_A of SGC comprises two subtypes, SGC_{A-ABS} (or ‘absolute’) and SGC_{A-FREE} (or ‘free’) -following the distinction made in Stump 1985 for comparable constructions in English. The first construction, which is represented by sentence (2)

above, differs from SGC_{A-FREE} in that the latter does not contain an overtly expressed subject for the gerund clause as shown in (7).

- (7) No leyendo del libro, el profesor se sintió perdido.
Not reading from-the book, the profesor REF felt lost.
‘Without reading from a book, the professor felt lost’

The subject of the gerund clause is coreferential with the participant in subject position in the main clause. The expression of the embedded subject constitutes the major structural distinction between the two subtypes of SGC_A . Yet, I distinguish two major subtypes within SGC_{A-ABS} and SGC_{A-FREE} in relation to the presence or absence of an overt conjunction expressing the semantic relation between the two events. Consider sentence (8), an instance of SGC_{A-FREE} .

- (8) Pedro ganó la beca, contando incluso con un estipendio para viajes.
Pedro won the scholarship, having even with an amount for travels
‘Pedro won the scholarship even having money for travel’

In this sentence the addition relation that is established between the events is introduced by the conjunction *incluso* ‘even’.

Determining the meaning of SGC_A becomes more difficult when the semantic relation between the clauses is not explicit. There are two possible positions for the description of SGC_A ; one says that SGC_A (or its equivalent in other languages) is vague regarding various conceptual interpretations; whereas the other says that the construction is polysemous in that it can encode consequence, reason, condition, temporal sequence, addition (or illative relation), etc.

In chapter VI I propose a description of SGC_A akin to the ‘vagueness’ perspective. I believe that all the meanings that can be attributed to the event relation in SGC_A can be reduced to the conjunction of two constraints: a mereological relation

between the temporal intervals associated with the events and an asymmetric co-occurrence condition between the events that I have called ‘generic condition’. Generic condition means that one event is presented as a ‘condition’ for the other event. All the semantic interpretations assigned to SGC_A can be derived from the satisfaction of the two constraint mentioned above; I show in chapter VII that this is true even for the SGC_A sentences that contain overt conjunctions.

2. ON THE SEMANTICS OF SGC: THE ENCODING OF EVENT RELATIONS

The meaning of the Spanish Gerund Construction consists of a relation between the events introduced by the gerund clause and the main clause, respectively. This event internal relation is encoded in SGC_C in a way that is different from the way lexical entries and sentences with complement structures encode it. The gerund event described by the gerund phrase is neither entailed nor encoded in the main verb’s lexical entry. The conjunction of these two properties –namely, the expression of an event internal relation and the fact that one of the events is not entailed by the main verb’s meaning- is not specific to SGC_C . It is characteristic of a number of constructions in different languages, from some instances of serial verb constructions, resultative, and depictive predications to converb constructions.

First, my analysis starts with the claim that SGC_C involves two eventualities; thus, in sentence (1), the main clause is associated with a description of the exiting event e_M and the gerund phrase is associated with the description of the carrying event e_G . This claim goes against the view that sentences comparable to (1) describe ‘different aspects of the same event’ (König 1995). In chapter III I support the two events hypothesis in a

principled way by proposing a ‘lexicalist’ criterion on event identity. According to the lexicalist criterion every verb is associated with a semantic representation that once combined with the verb’s arguments constitutes a description of an event that no other lexical entry can describe. The lexicalist criterion takes a strong intensional stance in that it predicts that every intensional description defines a portion of reality that cannot be exactly identical to the portion of reality circumscribed by a different intension. The lexicalist principle is, I believe, consistent with the Fregean tradition that assumes that intensions determine extensions; it goes a step further by claiming that each intension is associated with a specific extension.

The semantic analysis of SGC_C under the lexicalist criterion on event identity leads to the question of the sort of relation between the two events that allows SGC_C . In contrast, the description of constructions comparable to SGC_C in terms of ‘aspects’ of the same event never raises the issue of the relation between those ‘aspects’. A side benefit of the two events hypothesis is its role in capturing the typological differences between Spanish and English.

Second, I propose that the relation between the gerund and the main events in SGC_C can be precisely characterized in terms of well-studied mereological relations. It is particularly evident for $SGC_{C-MEANS}$ that the two events constitute a larger Macroevent by sharing a subpart. In the case of (1) this means that there is a subpart of the exiting event that is also a (non-necessarily proper) subpart of the carrying event. The category of event overlapping is transparent but, at the same time, it is not informative enough since it can be satisfied in different ways; it is not clear what the precise instantiation of this category is for linguistic forms in general and for $SGC_{C-MEANS}$ in particular. Thus, I

devote chapter IV to the elucidation of the specific ways in which $SGC_{C-MEANS}$ satisfies the event overlapping constraint.

The set of conditions I have identified can be separated into extensional and intensional properties. The extensional properties include the sharing of participants ('sharing' means 'identity' in the case of the Figure *estudiantes* 'students' in (1) as well as overlapping entities in the case of their paths and Time intervals, which are not required to be identical but just to overlap); identity of the relation among those participants (in the case of (1), the Motion relation) and the presence of an incremental relation between the two events (in the sense of a mutually proportional unfolding of the events). The intensional property, which has necessarily extensional consequences, is that the two event descriptions need to be asymmetric in that one description contains more information than the other about the shared subevent.

Third, I claim that the gerund event description (i.e. $\delta(e_G)$) needs to carry more information load *in relation to the shared subevent*. That is, it has to be more specific than the main even description about the relation that is shared.

The semantic relation in SGC_{C-CIRC} is weaker than event overlapping in that it imposes fewer constraints. Intuitively, the interpretation of sentence (4) -which is repeated below- conveys the sharing of a participant (i.e. *las niñas* 'the girls') and a (non-necessarily proper) Time subinterval. In other words, the two events are performed by the same entity at the same time.

- (4) Las niñas fueron a Toronto cantando Manuelita todo el viaje.
The girls went to Toronto singing Manuelita all the trip
'The girls went to Toronto singing Manuelita the whole way'

I propose in Chapter III that the relation between the gerund and main events is more than the mere sharing of two individual components of an event. The events in (4) not only share individuals but they share those individual in relation to a network of relations that form the internal structure of each event. That is, they share the students in relation to the same spatio-temporal circumstance and I label this semantics ‘Circumstance Sharing’ (CiS). Following the work of Carlson (1977) and Kraetzer (1985), this relation can be also characterized as the sharing of a ‘stage’ of an individual: an entity in relation to a node in the network of relations that constitutes an eventuality.

Spanish grammar encodes CiS in a way that is quite different from the expression of a mere temporal overlapping relation through ‘when-clauses’. I highlight the fact that this semantics is also expressed in different languages with a syntactic structure comparable to SGC_C; some cases of serial verb constructions and depictive predication in languages such as English or Spanish.

3. INTERFACE ISSUES

It seems a cross-theoretical valid assumption that, everything else being equal, simpler syntax-semantics interface descriptions should be favored over more intricate ones. In consonance, a central tenet shared by most theoretical frameworks distinguishes Core Syntax, which is the syntactic domain where the requirements of a lexical predicate are expressed. Lexical requirements in the case of verbs are typically associated with predicate-argument relations (as opposed to, for example, modifier relations). Therefore, Core Syntax is the projection of predicate-argument relations that are grammatically encoded in the meaning of the predicate.

In contrast, the gerund phrase (GP) in SGC_C does not express semantic information encoded in the lexical entry of the main verb. For example, in SGC_{C-CIRC} GP introduces an event that is not only not lexically encoded but further it is unpredictable solely from the meaning main verb. Therefore, the presence of GP in the Core Syntax of the main predicate cannot be derived from the semantics in any established way, but GP is precisely part of this Core Syntax since it acts as a complement.

I argue in this thesis that beside predicate-argument relations, Core Syntax should also be linked to the expression of mereological relations between events; chapters III to V show that the semantics of SGC_C involves mereological relations between the main and the gerund events. The expression of GP as a complement is, therefore, motivated.

The application of this criterion to SGC_C would predict that an event internal relation must be linked to a syntactic structure with one of the predicate's phrases deeply embedded into the other phase. In contrast, external event relations must be associated with a syntactic structure with a less dependent embedded predicate.

In chapter II, the gerund phrase in SGC_C is presented as a VP whereas is a clause in SGC_A . The fact that SGC_C is an obligatory control construction whereas SGC_A is not is consistent with the VP/S contrast between the two constructions. Further, the possibility of 'extracting' constituents from the gerund phrase shows the 'complement' status of the VP in SGC_C whereas the embedded S in SGC_A is in a peripheral (adjunct) position.

The fact that GP is a VP-complement in SGC_C follows from the linking pattern suggested above, which determines that two verbs can belong to a simple S if they describe events in a mereological relation. My description of SGC is consistent with that prediction since SGC_C consists of an event internal relation; thus, non-lexically required

embedded events falls into the same linking constraint as long as the event relation be mereological.¹

I should make clear that my purpose is not to claim that the syntactic structure corresponding to SGC_C or SGC_A have ‘meaning’. The idea is rather that the set of syntactic structures expressing a semantic domain (i.e. event relations) that contains different syntactic templates should be mirror the contrasts among the semantics they express (cf. the concept of interclausal hierarchy in Van Valin and LaPolla 1997). In our case, event internal relations (i.e. mereological relations) between events should be linked to the syntactic template that expressed one of the predicatee in a more dependent struture and, conversely, event external relations should be expressed in more independent phrases.

In chapter VIII I also show that SGC_C represents the instantiation of a specific pattern in relation to the semantic-pragmatic interface. SGC_C is systematically asymmetric regarding information structure in that the embedded clause is the default Focus of the sentence. The Focus status of the gerund clause is established by its

¹ I would like to call the broader issue presented by SGC_C ‘event augmentation’ and say that the expression of a complex event under a simple sentence is possible only for semantic relations that fall under the category of ‘event augmentation’. I think of ‘event augmentation’ as any addition to an event description of a relation (possibly, along with a new participant) that has in a part-whole relation with an relation already present in the original event description. This constraint is satisfied by relations of the type that Gawron 1987 calls ‘co-predication’ as exemplified by (i).

(i) John broke the glass against the wall.

The PP introduces a new relation –i.e. ‘movement’– that is inserted into the description of a single causal chain intrinsic to the event denoted by the main verb. The relation of ‘movement’ is not entailed by the verb, it is rather introduced by the PP but it identifies with the abstract causal relation that was already present in the event description.

Event augmentation is presumably also satisfied by ‘resultative predicates’ in English as described inter alia in Wechsler 1997b and Rapaport-Hovav and Levin 1999.

(ii) The joggers ran their Nikes threadbare. (Wechsler 1997c)

The Nikes being threadbare is a state that is temporally contiguous to the running event time interval and, further, event contiguous to the running event.

interaction with different ‘focus sensitive’ operators such as negation and frequency adverbial.

In relation to the semantic-pragmatic interface, chapter VIII makes apparent the presence of a general linking pattern. If the semantics involves a mereological relation described by asymmetric event descriptions, the more informative one has to be expressed by the gerund clause in SGC_C and the other in the main clause. In contrast, the same semantic relation in an Adverbial Temporal Clause (for example, ATC_{WHEN}) is expressed in the opposite way; namely, the whole needs to be linked to the when-clause and the part to the main clause. The pattern becomes apparent when the Focus structure is taken into account; in ATC the Focus is the main clause whereas the Focus is the gerund phrase in SGC_C . Therefore, in both cases the Focus expresses the Part and the Presupposition the Whole. More generally, I argue that for event overlapping relations such as the one associated with SGC_C , the Focus expresses the more informative constituent whereas the presupposition is linked to the less informative one.

The information structure is also crucial for the understanding of the temporal interpretation associated with the construction. In SGC_C the time interval t_G associated with the gerund event can be larger than t_M , the interval of the main event; that is, in (1) the carrying can last longer than the exiting and in (4) the singing can start earlier and finish later than the traveling. However, the assertion is circumscribed to the time interval t_M such that what took place before or after t_G is not at stake. In other words, the assertion is about the co-occurrence of the events during t_M , which is the time interval that corresponds to the presupposed event. The same is true for ATC_{WHEN} or ATC_{WHILE} in the sense that if they denote events with overlapping intervals, the relevant time frame is

given by the interval associated with the presupposed event (the one expressed by the embedded clause). Thus, the cross-constructive pattern is that the framing interval corresponds to the presupposition.

4. CROSS-LINGUISTIC ISSUES

The similarities of SGC_C to other constructions in Spanish (i.e. depictive predicates) and to comparable constructions in other languages have been noticed Talmy 1985, 2000; and Haspelmath and König 1995. This thesis does not contain a fully developed study of those parallelisms, but at various points I stress some connections. For example, in chapter II I show the structural similarities between SGC_C and depictive and resultative constructions. At the semantic level, it is also clear that the semantics of SGC_{C-CIRC} (Circumstance Sharing) also characterizes the meaning of depictive predicates whereas event contiguity can characterize resultatives in the same way as event overlapping captures the meaning of $SGC_{C-MEANS}$.

I also mention the similarities between serial verb constructions and SGC_C . There are structural similarities in that both constructions express two predicates in a reduced syntactic domain. It is certainly true that the structures are not necessarily identical. Serial verbs structures in some languages are analyzed as two predicates expressed under the same phrasal domain (i.e. structure labelled ‘nuclear juncture’ or ‘predicate composition’ or ‘complex predicate’). In contrast, I show that the gerund expands into a VP in SGC_C (serial verbs in Thai have been shown to expand into VPs also (cf. Muansuwan 2000)). However, it is still the case that both structures express a dependent

predicate in a domain simpler than expected (i.e. VP instead of S); furthermore, they are similar in that the tight syntactic relation is not determined by lexical requirements.

Some instances of serial verb constructions in various languages express the semantics that I propose in chapter III as Circumstance Sharing (CiS). This becomes a further descriptive contribution of CiS but it also constitutes a piece of evidence that supports it. Grammars do encode CiS relations and give them a special status by expressing two events in a reduced syntax.

Since the seminal work of Talmy 1985 on the typology of motion events there has been a fair amount of contributions to the description of the differences in the lexicalization of Manner (Means in the sense used in this thesis) in Spanish and English. On the typological note, the pervasive lexicalization of Means in English naturally leads to the fact that English relates event description in terms of ‘event contiguity’ (i.e. ‘resultative constructions’). In contrast, this is rather exceptional in Spanish where the tendency clearly favors ‘event overlapping’.

The analysis of the information structure of SGC_C presented in this thesis is, I would argue, its major contribution to a fuller understanding of the consequences that derive from the different encoding of Manner in English and Spanish.

I show in chapter VIII that Spanish takes Manner to be inferrable. Thus, if sentence (9) is asserted,

- (9) Los estudiantes salieron de la clase.
the students exited from the classroom
‘The students walked out of the classroom’

Spanish speakers infer from the presence of a Motion relation in the event description and the properties (i.e. human) of its Actor that the Motion involves walking. This constitutes

an R-implicature in the sense of Horn 1984 by which a more general term (i.e. Motion) takes the meaning of a more specific term (i.e. walking) due to a ‘default’ or ‘prototypical’ effect. It is also an I-implicature in the sense of Levinson 1987 since the weaker statement (i.e. the students moved) implicates the stronger one (i.e. the students walked); this implication does not fit the pattern of Q-implicatures in which the assertion of the weakest implies the negation of the strongest.

Interestingly enough, the ‘R-implicature’ status of Manner in Spanish is consistent with the information structure of SGC_C as described in chapter VIII. In this chapter I show that the gerund phrase is the default Focus constituent in SGC_C. The Focus status of the gerund in SGC_C is partially semantically motivated since I argue that grammars rank semantically optional higher than obligatory information for Focus.

Since Manner is an implicature in Spanish, it does not need to be expressed but, if Manner is indeed expressed, it amounts to the cancellation of the implicature (i.e. Motion events by Human are walking events) and, in consequence, Manner becomes the natural or default Focus of the sentence. This is, I believe, a further semantic motivation for the default Focus status of the gerund phrase in SGC_C; namely, it explains why the gerund phrase is the default Focus even if there are other constituents –complements of the verb– that have equivalent syntactic status. This is shown in sentence (10).

- (10) Los estudiantes salieron de la clase corriendo.
 the students exited from the classroom running
 ‘The students ran out of the classroom’

This sentence can be uttered because the expectation is that students will walk out of the room rather than run out of it. The gerund *caminando* ‘walking’ could replace *corriendo* ‘running’ in (12) only in a contrastive context where somebody had already asserted that

they ran out of the classroom or if because of some special property, the Actor was not expected to walk.

CHAPTER II

ATYPICAL COMPLEMENTS: THE SYNTAX OF THE SPANISH GERUND CONSTRUCTION

I propose in this chapter that there are two structurally different subtypes of the Spanish Gerund Construction: SGC_C and SGC_A . There are two main differences between these subtypes; first, the gerund phrase is a complement to the main verb in SGC_C whereas it is a typical adjunct in SGC_A ; second, the gerund is a clause in SGC_A but a (verb) phrase in SGC_C . The complement status of GP in SGC_C becomes apparent when we look at ‘wh-extraction’ and reordering; the non-clausal status is shown instead by the fact that SGC_C is an obligatory control structure.

1. INTRODUCTION

The Spanish Gerund Construction (SGC) is a complex sentence structure consisting of the combination of two predicates and their respective complements. The aim of this chapter is to offer an in depth description of the formal properties of the construction and its main subtypes as well as expose the underlying syntactic structures.

SGC encompasses two subtypes with different syntactic junctures joining the two verb phrases, SGC_C –or ‘complement’ SGC_C – and SGC_A –or ‘adjunct’ SGC. These two subtypes involve both the combination of a finite predicate phrase and a gerund predicate phrase, which is in both cases an optional constituent in the sentence. In contrast, their differences are numerous; for example, SGC_A usually separates the two predicate phrases with pauses whereas SGC_C does not allow pauses between the two phrases. This is by no

means the only distinction nor the most relevant one; other formal differences between the two structures are listed below.

- (i) SGC_A allows the gerund predicate to express its syntactic subject whereas SGC_C is an obligatory control structure.
- (ii) SGC_C allows Wh-words associated with syntactic arguments of the gerund predicate to be extracted whereas this is not possible in the case of SGC_A .
- (iii) SGC_C allows the gerund phrase to appear between the verb and its direct object argument whereas this is not possible in SGC_A .
- (iv) SGC_A –but not SGC_C – allows the gerund to be modified by grammatical aspect independently.
- (v) SGC_A modifies the basic temporal interpretation (or BTS for ‘basic temporal structure’) of the gerundial morphology whereas SGC_C keeps it unmodified.
- (vi) The information structure articulations of SGC_C and SGC_A differ and, in consequence, focus sensitive operators modifying the main clause have a rather different effect on the gerund predicate phrase in SGC_A and SGC_C .

The purpose of this chapter is, first, to describe those properties that distinguish SGC_C from SGC_A and, second, to propose that two different syntactic structures underlie each of those constructions. In a condensed way it all comes up to deciding the syntactic category of the phrase (i.e. V, VP, S) headed by the gerundial form and the structural level at which the gerund structure is embedded.

SGC_A can be seen as the Spanish equivalent of the construction that in English has been described as both ‘absolute’ and ‘free adjunct’ constructions (Stump 1985). In these constructions the gerund form heads a full clause combined at the clausal level with

the main clause; the two predicates are realized in independent syntactic domains. This is not so with SGC_C ; as it can be inferred from the properties listed above, the gerund predicate phrase belongs to a syntactic domain that is deeply embedded in the syntactic domain of the main predicate. The most compelling evidence of this dependency is the possibility of extracting syntactic arguments of the gerund and expressing them in the domain of the main predicate as if they were their own complements.

- (1) ¿Qué volvió Pedro gritando?
 What came.back Pedro screaming
 ¿What did Pedro come back screaming?

The direct object of the gerund phrase has been replaced by the Wh-word, which is expressed in the syntactic domain of the main predicate. This clause is headed by another predicate –i.e. *volver* ‘come’- and, hence, the Wh-word is not in the strict syntactic domain of the gerund.

This type of extraction is only possible out of complement structures; however, GP is not a complement in the typical sense of a constituent that is required by the predicate in order to form a grammatical sentence. But GP is not required in any sense by the main predicate; rather, in the only sense that GP could be considered a complement is in relation to the sort of syntactic dependency illustrated by (1).

We may think that this strong syntactic dependency between the predicates can be derived from the presence a ‘complex predicate’ structure. However, I will show that SGC_C does not fall easily under that category even though it shows unequivocal signs of a ‘reduced clause’ structure. A typical complex predicate formed syntactically has a main verb that is ‘incomplete’ (Alsina 1993); it has, hence, lexical semantic requirements that come to be satisfied by the embedded predicate. In turn, the syntactic realization of the

semantic arguments of the embedded predicate is substantially affected because the arguments of both predicates are projected into the same set of syntactic functions and assigned a single set of case markers. In short, the two predicates are not combined at a phrasal level but as lexical items that project into the same phrasal domain.

The typical complex predicate structure in Romance is represented by the ‘causative construction’ (Aissen and Perlmutter 1983; Zubizarreta 1987; Alsina 1991; Koenig 1994; Van Valin and LaPolla 1997, Paris 1999). As a result of this research, it is possible to apply a battery of tests that can detect the presence of a single syntactic domain for two predicates: clitic climbing, reflexivization across-predicates and upward promotion of downward arguments in passive constructions. These tests, for example, show that the so-called ‘hacer-por’ (or its equivalent in French ‘faire-par’) causative construction behaves as a complex predicate for each of those tests in the sense of showing the presence of a single syntactic domain for both predicates. In contrast, *SGC_C-MEANS* does not pass these tests.

Therefore, it would be misleading to assign the same syntactic structure to *SGC_C* and to causative constructions. The different behaviors of *SGC_C* and the causative constructions in relation to those tests confirm what is a perceptible difference between them. Namely, the gerund clause is a syntactically and semantically optional constituent whereas the infinitive clause in the causative construction satisfies a lexical requirement of the main verb. Thus, the gerund and the infinitive clauses in their respective constructions represent the adjunct/argument opposition, which is a pivotal distinction in syntactic theory; hence, their differences are expected.

The unusual property of SGC_C is that allows extraction from an adjunct position, something that has been traditionally seen as exceptional and restricted to highly marked contexts (i.e. ‘parasitic gaps’); although more recently it has been shown to be a more common phenomenon than previously thought (Hukari and Levin 1995).

There are different ways to capture these unusual properties of SGC_C without being inconsistent with the one’s overall syntactic theory. For example, Bouma, Malouf and Sag (2000) proposes a **DEPENDENTS** attribute that lists all the syntactic dependents of a head. This is the list where, among other facts, the ‘extractable’ NPs are listed; hence, by listing the gerund phrase we allow the extraction of its arguments. In addition, the arguments that can be instantiated be anaphoric are listed in a different list, the **ARG** list, where semantic arguments appear. Since the arguments of the gerund clause would not appear in this list, we capture the fact that the gerund clause falls within the syntactic domain of the main clause without forming a complex predicate with the main predicate.

The properties of the gerund can be also captured within a different set of assumptions in terms of Role and Reference Grammar. This theory makes a sharp distinction between predicating relations and modifying relations. The gerund clause can be described in RRG much like an adverb as a modifying clause; this means that the gerund clause is in the syntactic core of the main clause without sharing its own arguments.

However, I will present a theoretically neutral description of SGC_C in this paper. This does not mean, of course, that the description is assumption-free but rather that it makes assumptions that are widely accepted.

2. ON THE SYNTACTIC CATEGORY OF THE GERUND PHRASE

Contrary to English, what has been traditionally called ‘gerund’ in Spanish grammar is a form that has the distribution of verb forms. They can only be modified by adverbs, take NPs as arguments, and (may) have subjects; these are among the most salient properties that they share with verbs. The central concern of this chapter is the determination of, first, the type of phrase headed by the gerund and, second, the nature of the syntactic connection between the gerund phrase and the main clause.

Sentence (2) is an instance of the Complement Spanish Gerund Construction (SGC_C), one of the main subtypes of SGC. The predicate *entrar* ‘to enter’ is expressed by a finite verb whereas the predicate *romper* ‘to break’ is expressed by a gerund form.

- (2) Tu jefe entró a la oficina rompiendo mi carta.
your boss entered to the office tearing-apart my letter
‘Your boss entered the office tearing my letter apart’

The interpretation of SGC_C includes two event descriptions –namely, $\delta(e_M)$ associated with *entró* and $\delta(e_G)$ associated with *rompiendo-* in a ‘Circumstance Sharing’ relation; this basically means that the event descriptions share a relation between a participant and a spatio-temporal circumstance as it will be shown in a subsequent chapter.

The temporal interpretation of SGC_C assumes that the two described events take place (partially) at overlapping times. Ultimately, the temporal location of the gerund event in relation to Speech Time will be determined by the Tense in the main clause. The morphosyntactic marking of Tense in one clause and the lack of it in the other reflects a sort of structural asymmetry that I will express by calling the tensed clause ‘main clause’ and the gerund phrase ‘dependent’.

This section is dedicated to defining the nature of the syntactic linkage between the two predicate structures connected in a SGC. In consequence, my aim here is determining the syntactic level at which the predicate phrase are combined, which could be at a clausal, VP or V level. Clausal linkages contain two predicates that are independent at almost every syntactic level. This typically means that they have independent arguments, modifiers and other peripheral elements, but that they constitute a unit under the scope of a single information structure.

I will show that SGC_C is not a clausal juncture; that is, the gerund phrase is not a clause (in the traditional sense of the S/IP/CP category). This property can be made apparent by showing that it does not allow the gerund clause to have an independent subject as (3) illustrates. This behavior is common to non-finite forms in Spanish (and English) in most syntactic contexts (it is rather exceptional for a non-finite clause to express its subject overtly but see De Miguel 1996).

- (3) a. *Juan entró a la oficina rompiendo Pedro mi carta.
 Juan entered to the office tearing-apart Pedro my letter
 ‘Juan entered the office while Pedro was tearing my letter apart’

The ungrammaticality of (3) can be derived from the fact that the event description in the gerund clause expresses the Actor performing the event e_G ; this violates the requirement of the construction about the control of the reference of the embedded subject by an argument in the main clause. In semantic terms, this means that the two predicates contain each an argument position satisfied by the same individual.² This observation can be generalized by saying that the Subject of the gerund phrase needs to be co-referential

² This is not an entirely accurate description. A more precise characterization should say that the individuals need not to be identical, but only referentially related or, as it has become standard in certain syntactic practice, they need to be co-indexed.

with an argument of the main clause, which means that SGC_C is an obligatory control structure.

Moreover, SGC_C cannot be said to simply be a ‘fixed’ obligatory control construction because the controller may be either the subject or direct object of the main verb. Sentence (2) contains a subject controller, but it is also possible to have direct object controllers as in (4) below. María is the individual expressed as the direct object of the main clause and also performs the activity denoted by the gerund clause; the direct object in the main clause can thus also be the controller. SGC_C should be characterized as a ‘non-fixed’ obligatory control construction.

- (4) Tu vecino vió a María llorando.
your neighbor saw to María crying
‘Your neighbor saw María crying’

On the contrary, typical clausal junctures such as ‘that-complement’ clauses or temporal clauses in adverbial temporal constructions (ATC) allow independent subjects for the dependent and the main clause. The comparison between ATC and SGC_C is useful because both constructions share several semantic and syntactic properties. For instance, one difference can be illustrated by the instance of ATC in sentence (5).

- (5) María le envió una carta cuando Pedro consiguió el trabajo.
María him-DAT sent a letter when Pedro got the job
‘María sent him a letter when Pedro got the job’

The differences between SGC_C and ATC are numerous. First, the subjects of the two clauses in ATC can be overtly expressed and refer to distinct individuals as can be seen in (5). Further, ATC introduces the adverbial clause with a complementizer that signals both the clausal linkage of the clauses as well as the semantics of the connection between

them; in contrast, SGC_C lacks any overt connection between the clauses. Finally, SGC_C contains a non-finite dependent clause that contrasts with the finite status of the adverbial clause in ATC.

In sum, the gerund phrase (GP) is non-finite and, hence, lacks tense specification. It cannot have an overtly expressed subject but rather the argument that is supposed to be projected into subject position is referentially determined by one of the main verb's syntactic arguments. Further, there is no complementizer indicating the embedding of one structure into another nor the semantics that joins these two structures.

None of the properties that were said to characterize GP are typical of embedded clauses in Spanish, these are typically finite, introduced by a complementizer and have independent subjects. I subscribe to the hypothesis -maintained in one way or the other by probably most syntactic theories- that all those properties are sensitive to structural conditions. Thus, the reference of an argument cannot be controlled by an argument of a different predicate if the controllee is within a clausal domain; therefore, we need to conclude that the gerund cannot head a clause in SGC_C .

The data presented thus far indicate that the phrasal category of the embedded structure in SGC_C cannot be clausal; the next paragraphs should make clear that it cannot correspond either to a lexical verb. Neither the gerund phrase nor the main verb phrase can be of category V.

The members of a complex predicate hold the tightest syntactic connection; this structure allows two lexical items to share a single syntactic domain, that is, both predicates share a single set of syntactic functions and morphosyntactic markers- and the

two predicates satisfy their lexical requirements in this single domain. That is, these predicates project their semantic representations into syntax within the same syntactic domain; the arguments of both predicates compete for the same syntactic functions and the morphosyntactic markers of the arguments of one predicate may affect the marking of an argument of the other predicate. They are interdependent for their syntactic function, morphological case, and behavior in a passive structure. It has been shown for Spanish in particular –cf. inter alia Aissen and Perlmutter 1983, Zubizarreta 1987, Moore 1991, Paris 1999- that the syntactic properties that characterize complex predicates are exposed when clitic climbing, passive structures and reflexives are considered; this is the task on which we embark next.

In passive structures, for example, nuclear junctures allow the direct object or (Undergoer) to be promoted to subject position. This fact is explained if the rule that projects semantic arguments into syntax should consider the arguments of the two verbs at once and project them into a single domain. For instance, if the rule that selects subjects or pivots in terms of a hierarchy –as in RRG or Dowty 1991-, and the highest ranked member happens to be a semantic argument of the verb in the dependent predicate, this argument should be promoted to subject. This is precisely what is shown by the causative construction ‘*hacer-por*’.

- (6) El jefe hizo limpiar el auto.
The boss made clean the car
‘the boss had the car cleaned’
- (7) El auto fue hecho limpiar por el jefe.
the car was made clean by the boss
‘The boss had the car cleaned’

Sentence (6) contains an infinitive verb embedded into a finite clause headed by a verb in the active voice. Sentence (7) contains the same main verb than the previous one but in the passive voice. Crucially, the argument that is promoted to subject position is not the direct object of the main verb but that of the embedded verb. This promotion should not be possible if the predicated were not sharing –as they are- the same syntactic domain for the realization of their arguments.

In contrast, SGC_C does not allow the direct object of the gerund clause to be the subject of the sentence in passives as it can be inferred from the ungrammaticality of sentence (9).

- (8) El soldado trajo la pólvora empujando un carro.
The soldier brought the explosive pushing a wagon
'The soldier brought the explosive by pushing a wagon'
- (9) *Un carro fue traído la pólvora empujando (por el soldado).
A wagon was brought the explosive pushing (by the soldier)

This behavior can be predicted if the gerund in SGC_C consists of a VP rather than a V. Since both the main verb and the gerund head VPs, their respective arguments belong to two independent syntactic domains and, since passives target the Subject and Object of the same syntactic domain, the presence of two phrasal domains disallows the promotion of the embedded verb's direct object to the main subject in SGC_C .

Clitic placement is yet another test that indicates that SGC_C does not involve nuclear juncture but rather that the gerund verb heads its own VP (core in RRG). Clitics are attached to the predicate that hosts them as argument-expressing constituents, this is always true in simple sentences but it is also true in complex predicate structures. In the

instance of '*hacer-por*' below, the direct object of main verb can be expressed by the clitic *lo* attached to the main predicate.

- (10) El jefe lo hizo lavar por el empleado del taller.
The boss it made wash by the employee of-the repair-shop
'The boss had it washed by the repair-shop employee'

The clitic *lo* expresses the direct object of the embedded verb *lavar* but nonetheless is appended to the main verb *hacer*. It is well-known that complex predicates in Romance allow clitics expressing arguments of the complement verb to attach to the main verb. In contrast, clitics associated with arguments of the gerund predicate in SGC_C cannot 'climb' and be prefixed to the main predicate as shown in (11).

- (11) *El intendente lo salió del garage manejando.
The major left from-the garage driving
'The major drove it out of the garage' (intended meaning)

The main verb is intransitive; the direct object clitic can only express the Undergoer semantic argument of the gerund predicate. The ungrammaticality of this sentence gives yet further support for discarding the hypothesis that a nuclear juncture is involved in the syntax of SGC_C .

Finally, let me test SGC_C with respect to the expression of anaphoric relations among arguments of different predicates. Traditional wisdom says that a coreferential relation between two NPs in the same phrasal domain requires an anaphor. Since Complex Predicates project two predicates into a single VP, coreferential relations between arguments of the same predicate require the presence of a reflexive marker. This is precisely the behavior displayed by the causative construction as illustrated below.

- (12) El jefe_i se_i/*lo_i hizo afeitar por Pedro.
 the boss_i REF_i/it-ACC made shave by Pedro
 ‘The boss had Pedro shave him’

The relevant feature of this construction is that the Actor of the dependent clause cannot bind the reflexive; in contrast, the Actor of the main clause does. The only possible structure that can capture this fact is one where there is no subject position for the embedded infinitive verb at all. The fact that the antecedent of the reflexive clitic is an argument of a different predicate than the one the reflexive is an argument of derives naturally from the hypothesis that a V-V (i.e. nuclear) structure is involved: the two arguments belong to the same VP and the same argument structure, which is the domain of obligatory reflexivization in Spanish.

A reflexive pronoun in the dependent clause is usually ambiguous in SGC_C since its antecedent can be either the subject or the direct object of the main verb. This is illustrated below.

- (13) El maestro le habló al niño mirándose en el espejo.
 the teacher him talked to-the kid looking-REF in the mirror
 ‘The teacher talked to the kid looking at himself in the mirror’

Either *el maestro* or *el niño* can determine the referential value of the reflexive pronoun. This variation coincides with the fact that either of those two arguments can be the controllers of the Actor of the embedded verb. Thus, the explanation for that ambiguity is precisely that the antecedent of the reflexive is in fact the controllee position, namely, the subject of the gerund phrase. This is precisely what we would predict from the analysis of other examples of controlled VP-complements or core junctures, such as those involving the verb *forzar* ‘force’.

- (14) Juan_i lo_j forzó a afeitarse*_{i/j}.
 Juan him forced to shave-REF
 ‘Juan forced him to shave’

In this case there is no ambiguity in the interpretation of the reflexive because there is no ambiguity either in the selection of the controller, which can only be the main direct object/Undergoer. One of the central properties to be explained in this sentence is why the subject of the main verb (i.e. *Juan*) cannot bind the reflexive pronoun. The answer is that the antecedent and the pronoun belong to different VPs (or argument structures). This means that they have been projected into different syntactic domains and each syntactic domain has its own (expressed or unexpressed) subject.

Similarly, in SGC_C as well as in typical control structures such as the one in (14), the potential Actor of the embedded verb can bind an anaphor. This contrast between SGC_C and control structures, on the one hand, complex predicates, on the other, stems from the phrasal nature gerund phrase. That is, I will assume that there is a VP that corresponds to the gerund and that is the domain where the anaphor can be bound.

In conclusion, evidence presented so far suggests that SGC_C contains a gerund verb heading a VP structure. Two facts have been relevant for that conclusion; first, SGC_C cannot have an overtly expressed independent subject. Second, the reference of the semantic argument that should have been projected into this position is determined by the reference of the subject or object of the main verb. In addition, if it is assumed that those two facts are associated with structural properties, the conclusion cannot be other category of the phrase containing the gerund cannot be a clause but rather a VP.

In addition, the promotion of the embedded Undergoer to subject position is not possible indicating that the two predicates do not share a single domain where all their arguments are projected into syntax; hence, the embedded gerund must head a VP rather than V. The same conclusion is supported by the fact that the attachment of embedded clitics to the main predicate is also disallowed. Finally, the ambiguity in the binding of an argument of the gerund indicates that SGC_C does not express a complex predicate structure but rather a VP whose unexpressed subject is controlled by one of the main verb's arguments.

Yet, another piece of data that reveals the underlying structure of SGC_C comes from clefting. The pseudo-cleft sentence in (15) shows that the controller NP and the gerund cannot be both preposed; it is grammatical only in a reading where the gerund is a modifier of the Noun within the NP, which is a structural configuration irrelevant for our purposes here.³ In contrast, the preposing of only the NP controller in (16) results in a grammatical sentence. This means that the NP in topic position –or in Left Detached Position, using RRG's terminology- is possible whereas the gerund needs to remain in its postverbal position.

- (15) *La toalla colgando es lo que trajo Pedro.
 The towel hanging is the-NEUTER that brought Pedro
- (16) 'La toalla es lo que Pedro trajo colgando.
 The towel is the-NEUTER that Pedro brought hanging
 'The towel is what Pedro brought hanging'

³ As already stated in chapter I, structures where the gerund phrase is within the NP as a modifier will not be studied in this thesis. The structural properties of the NP-gerund (as I call the gerund phrase within NP) and SGC are entirely different; further, the semantics of the two constructions are also entirely different regarding the role played by the gerund phrase.

The data above can be accounted for only if the controller NP and the gerund (in general, the secondary predicate) do not form a constituent and, hence, they can be split into two different positions.

3- SEMANTIC ADJUNCTS AS SYNTACTIC COMPLEMENTS: THE GERUND PHRASE IN SGCC

In this section I deal with the issue of the dependency and, hence, the embedding of the gerund phrase in relation to the main predicate. There are basically two alternative descriptions; either the gerund phrase is a complement –an internal constituent- or it is an adjunct –a peripheral constituent- of the main clause. It is important to stress that this question is orthogonal to the specific properties of the phrasal category of the embedded phrase. The opposition internal/peripheral constituent –that is, argument or adjunct respectively- is primarily motivated in a distinction between obligatory and optional syntactic constituents.

Most grammatical theories have certain principled ways of projecting the semantic distinction between arguments and adjuncts into syntax. For example, in RRG the differential criterion is linking as regulated by the Completeness Constraints (Van Valin and LaPolla 1997), which determines that every semantic argument needs to be projected into syntactic structure. This rule does not apply to optional semantic elements. Thus, every argument in the semantics of a predicate is satisfied within the VP; in contrast, the periphery is the domain where optional –i.e. non-lexically required- constituents are expressed. Lexical Functional Grammar has also a principle on the same note as the Completeness Constraint. The Principle and Parameters approach uses the

Projection Principle as a way of ensuring that subcategorized elements are satisfied at every syntactic level; in turn, subcategorization requirements are mostly determined by the lexical semantics of the verb involved (Jackendoff 1990, Pinker 1989). In HPSG, the constituents listed in the ARG-ST list of the verb sign necessarily appear in the valence list and, hence, need to be cancel out in syntax.

The syntactic distinction between argument and adjuncts has consequences that are handled differently in each theory. For example, it has been long believed that syntactic arguments and peripheral constituents behave differently with respect to ‘extraction’. In the case of embedded verb phrases or clauses, the complements of the embedded phrase can only be extracted if the embedded VP or S is itself a complement of the main clause but they cannot if the VP or S is a syntactic adjunct.

The structural description assigned to SGC_C must reflect its extraction properties regardless of the framework being used to represent it. For example, in RRG this behavior is ultimately motivated at syntax-information structure interface. It is proposed that a restricted Focus structure –e.g. wh-word and, in general, any Focus structure that single out smaller constituents than S or VP- can target phrasal elements that are immediate constituent of the periphery; if the gerund phrase in SGC_C were a peripheral constituent, it should be possible to extract it as a whole but it should not be possible to extract internal individual constituents of GP. This predicts that in an interrogative structure, the fronted Wh-word can only express constituents internal to the syntactic domain headed by the main verb or the entire periphery –but not individual constituents of it-. Consider for example the obligatory control structure in (17) below.

- (17) ¿Qué lo forzó Pedro a sacar?
 What him-ACC forced Pedro to take-out
 ‘What did he force Pedro to take out?’

The Wh-word in (17) expresses the direct object argument of the embedded verb. Since the infinitive clause satisfies a syntactic requirement of the main clause, extraction out of it is allowed. The relation between Wh-extraction and information structure is rather transparent since the Wh-word expresses the Focus of the sentence it belongs to in a restricted Focus structure.

In contrast, there cannot be extraction out of adjunct constituents as it is shown in (18). In this case, the Adverbial Temporal Construction (ATC) contains an embedded ‘when-clause’ in adjunct position and, consequently, none of its arguments can be extracted.

- (18) *¿Qué le envió María una carta cuando Pedró consiguió?
 what him-DAT sent María a letter when Pedro got

Notice that the ungrammaticality of this sentence cannot come solely from the presence of a complementizer between the clauses that would act as a ‘barrier’ for movement since Spanish allows extraction from ‘that-complement’ clauses.

- (19) ¿A quién espera Juan que María traiga?
 to whom hopes Juan that María bring-SUBJ
 ‘Who does Juan hope María would bring?’

In this case, the complementizer does not block the extraction of internal constituents of the embedded clause. The contrast between (18) and (19) suggests that the ungrammaticality of the former is due to the fact that its embedded clause is an adjunct. Therefore, extraction can be used as a test for the relation of the gerund VP in SGC_C to

the main VP regarding the internal-peripheral contrast. In this sense, sentence (20) shows that SGC_C allows the extraction of constituents internal to the gerund phrase.

- (20) ¿Qué entró rompiendo Juan?
what entered breaking Juan
'What was Juan breaking coming in?

This example is crucial for our understanding of SGC_C because it shows that the direct object of the gerund can be extracted, which indicates that gerund phrases cannot be in adjunct position. The fronted Wh-word *qué* represents the direct object of the gerund phrase and it appears outside the syntactic domain of the phrase headed by the gerund. In addition, the inversion of the subject main verb appears after the gerund rather than right after the main predicate as expected.

The contrast between the behavior of the gerund phrase in SGC_C –for example in (20) above- and a typical peripheral constituent such as the adverbial clause in Adverbial Temporal Constructions (ATC) is clear. As shown in (18) above, ATC does not allow the structure represented by (20). In chapter VIII I will show that Spanish constructions with adverbial subordinate clauses -like their English counterpart- take the main clause as Focus; the adverbial clause is part of the presupposition. In ATC a wh-word in presentential position can only express complement constituents of the main clause or the entire embedded clause.

In terms of the RRG analysis mentioned above, the contrast between (20) and (18) can be predicted from the fact that the when-clause is in the periphery in ATC whereas the GP should not be peripheral in SGC_C .

Sentence (20) is consistent with the structural description I have hypothesized; namely, SGC_C can be described as a VP embedded into the main VP. That is, the

grammaticality of (20) cannot be derived solely from its information structures configuration, this type of extraction has to be ultimately licensed by purely structural conditions; namely, by the fact that the gerund VP is internal to the main VP. Otherwise, the whole gerund clause would need to function as a single unit under the scope of Focus and, in consequence, should not allow the extraction of its internal constituents.

Another crucial piece of evidence for the GP complement hypothesis is that the gerund phrase can be reordered with unquestionable syntactic arguments of the main verb. As it is shown in (21), GP can appear in an intervening position between the main verb and its direct object.

- (21) a. Juan trajo caminando a su hijo.
Juan brought walking to his son
'Juan brought his child walking'

This is an important test because it is commonly assumed that this type of 'reordering' can only exist between sister constituents. This confirms that the GP in SGC_C behaves like a structural sister to true complements, an expected fact if they are themselves syntactic complements.

Thus far gerund clauses in SGC_C have proved to behave rather differently than typical adjunct clauses (i.e. adverbial clauses) in allowing extraction of internal constituents and reordering with complements. Nonetheless, SGC_C departs from typical non-finite complement clauses in Spanish –i.e. obligatory control structures– in an important way; namely, the embedded clause does not satisfy lexical requirements of the base entry of the main verb and, in consequence, it is optional. Therefore, GPs share some properties with complement phrases and other properties with adverbial clauses –in

relation to linking- in spite of the rather different structures of these two types of clauses or phrases.

On the one hand, gerund and (non-finite) complement clauses are part of an obligatory control construction and allow extraction and reordering. On the other hand, gerund clauses have properties that characterize adverbial clauses (Diessel 2001) since they are optional –as was shown above- and they *modify* either a VP or S. If ‘modification’ denotes a relation by which a predicate of any sort adds up more information about its argument, GPs are also similar to adverbial clauses and, more generally, they behave just like adverbs in general. In particular, their distribution mirrors the one of manner adverbs. Gerund clauses can appear at the end of the sentence as in (2) but also they can appear in intervening positions between the direct object and the verb as it was shown in sentence (21). This is also true of manner adverbs as shown in sentence (22).

- (22) Juan trajo (lentamente) a su hijo (lentamente).
Juan brought (slowly) to his son (slowly)
‘Juan brought his son slowly’

One way of capturing the similarities and differences between, on the one hand, GPs and adverbs and, on the other hand, gerund and complement clauses is to assimilate gerunds VPs to adverbs. This means that rather than treating the gerund-main clause relation as an instance of an argument-predicate relation, we could describe the relation between the gerund phrase and the main clause as one of modification.

There is a problem with the parallel between GPs and adverbs. The latter are not participant introducing constituents whereas GP does carry a structure of participants given that the gerund is a verb predicate and, in consequence, it introduces an event and

this event's internal structure. This is a fundamental distinction because it determines that the relation between GPs and main clauses is at the level of their argument structures; not introducing arguments, modification is not a relation that involves different argument structures.

In this respect GPs are more similar to typical adjuncts expressed by PPs in that they are participant-introducing elements whereas modifiers are not. The typical adjunct introduces an internal participant to the main event.

(24) John came by bus.

The PP 'by bus' introduces a participant (i.e. the bus) that is within the system of internal relations that form the main event; that is, the bus is related to the motion relation introduced by the verb and the Figure or Theme participant. In this limited respect, GP is more similar to an adjunct than to a modifier since it also introduces participants (in fact, an event and its participants).

Clausal adjuncts and GPs are still different even if they are both participant-introducing constituents. The participants introduced by clausal adjuncts are not related to the internal structure of the main event. It will be shown in chapter VI that in adjuncts of the kind that instantiates ATC, the adjunct clause is semantically connected to the main event by a relation that joins the two events *externally*.

There is further a parallel between adjuncts and GPs in that there are GPs that take a participant in the main clause and connect it to an entirely new relation like in (2); any new participant that is introduced by the gerund phrase (i.e. *mi carta* 'my letter') is related to the overall structure by the relation associated with the gerund (and, hence, with the event described by the gerund phrase). This relation may be entirely new like in

(2) or it may be already present in the main clause like in (21). In these cases, the motion relation was already present in the main event and it is identical to the relation of the gerund event. This opposition parallels the distinction in Gawron (1987a) between adjuncts PPs and co-predicative PPs, respectively.

In sum, GPs in SGC_C share with adverbs the fact that they are syntactically and semantically optional but not peripheral constituents; they are optional syntactic complements. However, they cannot be simply assimilated to an adverb because GPs are participant introducing structures –i.e. argument structures- and, hence, SGC_C involves more than simply a modification relation (namely, the specification of a relation). There are cases where the whole role of the gerund is to further specify the semantic relation introduced by the main verb (example 21); but it is perfectly natural, and possibly more frequent, for the gerund to introduce new participants (e.g. 8) or sentence (25) below and, even, new relations (e.g. sentence (2)).

- (25) El cuarteto deleitó al público tocando instrumentos de época.
The quartet delighted to-the public playing instruments of epoch
'The quartet delighted the audience by performing with period-instruments'

In conclusion, the gerund phrase in SGC_C cannot be entirely assimilated to the syntactic behavior of any other form. Maybe its uniqueness is that it shares properties with different forms that are incompatible among themselves in different ways.

3.1. SOME IMPLICATIONS FOR THE ARGUMENT-ADJUNCT DISTINCTION

A widely held belief about the organization of grammars is that there is a sharp distinction between core internal and core external constituents or, in other words, between syntactic arguments and adjuncts. As stated earlier, the central property that

drives the distinction is the notion of lexical requirement in the sense that constituents within the core are elements expressing the requirements imposed by the lexical semantics associated with the main predicate in the clause. In consequence, the VP/IP (or core) is the domain where the Completeness/Coherence/ Projection Principles are satisfied. In contrast, the periphery contains elements that are not lexically required and, in consequence, are syntactically optional. In transformational grammar this distinction is described in terms of an L-domain, which defines the domain of proper-government.

There is a sense in which SGC_C calls this distinction into question. The gerund clause is a VP internal constituent since it allows extraction of its own internal constituents; however, it is at the same time an optional constituent. These two properties are not supposed to come together from a traditional perspective.

It is not the case that the construction falsifies the distinction between arguments and adjuncts if this categorial difference is maintained within the domain of linking. It is indisputable that there are syntactically required constituents that are so specified by a lexical item. GPs in SGC_C only presents a problem if that contrast is taken a step further to identify the opposition between lexical requirement and non-requirement as marking necessarily a structural distinction; namely, the core-periphery or complement-adjunct opposition.

The conclusion does not need to be that the distinction between complements and syntactic adjuncts is superfluous. There are a number of constructions where the distinction seems to play a fundamental role; for example, pronominal expressions of coreferential constituents vary in relation to the positions of the pronoun in the core

internal or in the periphery. Thus, if the pronoun expresses a semantic argument of the predicate and is coreferential with another semantic argument of the predicate, it has to be expressed by an anaphora (i.e. ‘John killed himself’ rather than *‘John killed him’). If the coreferential pronoun does not express a semantic argument of the same predicate, it cannot be an anaphora (i.e. ‘John only came in when he/(**himself*) saw the flames’). Also, passive structures target only core constituents; and, finally, agreement relations are usually restricted to markers within the same core syntactic domain.

The appropriate interpretation of the evidence presented so far is necessarily more modest. I believe that semantic optional elements do not form a unified class for structural purposes; this means that there are semantically optional constituents that are peripheral whereas others are core or VP internal.

3.2. THE ISSUE FROM A PRINCIPLES AND PARAMETERS PERSPECTIVE

Principle and Parameters has defined a qualitatively different syntactic domain where lexical requirements are satisfied since lexical categories define the domain of ‘proper government’. Typically, a predicate properly governs its internal syntactic arguments, it does not govern its adjuncts. A central structural motivation for the distinction has been ‘wh-movement’; it is believed that ‘movement’ is constrained by government since the ECP (Empty Category Principle) requires the trace left behind by the moved element to be properly governed. This predicts that movement out of adjuncts should not be possible (since the trace would not be properly governed) (see Chomsky 1981, Huang 1982).

The structural distinction between arguments and adjuncts seems a plausible generalization when one looks at factive verbs.

(26) What does Robin regret that Kim ate?

(27) *Why does Robin regret that Kim ate the cake?

The extraction of a syntactic argument is possible as in sentence (26) whereas the extraction of an adjunct of the embedded clause is not; it has been argued that the different structural position of adjuncts and arguments explains the contrast (Hukari and Levine 1995).

A different sort of phenomena is represented by the extraction of constituents out of adjuncts. One would expect that if the extraction of an adjunct is banned, the extraction of a constituent inside of this adjunct would be even worse. However, it has been long recognize that this is indeed possible. The phenomenon is illustrated by ‘parasitic gaps’ shown by sentence (28) (Engdhal 1983).

(28) Which book_j did you file t_j before reading e_i?

The extraction out of an adjunct constituent (i.e. ‘before reading’) doesn’t follow from the basic assumptions of the theory and it demanded the postulation of additional ‘operators’ (Chomsky 1986) that constitute an A-chain.

These examples would not present a descriptive problem if the assumption about a *necessary* structural distinction between syntactic adjuncts and syntactic arguments is discarded. That is, the correlation between semantically optional constituents and syntactic adjuncts is not necessary, there are semantically optional constituents that can be complements and SGC_C is a clear instance of that possible linking.

4- DISTINCTIONS AMONG SGC_C SUBTYPES

The subtype SGC_C contains in turn different subtypes that I will differentiate essentially on semantic terms in subsequent chapters. In this section I would like to show some subtle formal distinctions among some of them. The complement nature of the GP in SGC_C is, I believe, common to all its subtypes but can be instantiated in more than one way.

For example, the subtype SGC_{C-CAUSE} of SGC_C, which is defined by the property of having a causative verb as head of the main clause differs from other subtypes with respect to extraction. Sentence (29) illustrates the construction.

- (29) El potro sorprendió al público saltando el corral.
The stallion surprised to-the public jumping-over the corral
‘The stallion surprised the spectators by jumping over the fence’

Causative verbs contain a relation between two situations, the ‘causing’ eventuality and the caused event; most causative verbs in Romance and Germanic languages contain very little or no information about the causing eventuality but are more specific on the resulting state. The semantics of SGC_{C-CAUSE} establishes that the gerund clause describes the causing event left unspecified by the main predicate. The verb *sorprender* has a causative meaning that can be schematically described as ‘something did something causing a change in the mental state of somebody/something else’. The gerund clause describes the unspecified causing event, which in the case of sentence (28) denotes the stallion jumping over the fence.

The subtype $SGC_{C-CAUSE}$ inherits all the properties of SGC_C ; however, there are certain properties that are specific to the subtype that should be explored. The main distinction between SGC_C illustrated by (1) –subtype SGC_{C-CIRC} and $SGC_{C-CAUSE}$ is related to extraction; $SGC_{C-CAUSE}$ does not allow the extraction of the embedded direct object as shown below.

- (30) *¿Qué sorprendió al público (el potro) saltando?
 what surprised to-the public (the stallion) jumping-over
 What did the stallion jump over surprising the spectator? (intended meaning)

Beside extraction, $SGC_{C-CAUSE}$ does not seem to differ from SGC_C in any other respect. For example, $SGC_{C-CAUSE}$ does not allow extraposed constituents. This point is illustrated by the sentences in.

- (31) #Saltando el corral, el potro sorprendió al público.
 jumping-over the corral, the stallion surprised to-the public
 ‘By jumping over the fence, the stallion surprised the spectators’
- (32) *Cantando ‘Cielito Lindo’, tu padre llegó a casa’
 singing ‘Cielito Lindo’, your father arrived to home

Sentence (31) contains an extraposed gerund clause. As I will show in detail later, the reading that corresponds to this sentence is that of ‘consequence’; namely, the main event is a consequence of the gerund event. In this reading, the two events are in a sequence and are taken as individual wholes by the consequence relation. In contrast, the causative reading takes the gerund event to temporally overlap with the main event and, further, to be the initial part of the main event. The ‘consequence’ reading that makes (31) acceptable is formally possible if the sentence is assigned a structural description that corresponds to SGC_A . $SGC_{C-CAUSE}$ does not allow extraposed gerund clauses nor does SGC_C in general as shown by (32).

The question, then, is whether the difference regarding extraction is the effect of a major structural difference between the two constructions. The extraction possibilities of SGC_C as shown in (20) permitted us to draw the conclusion that the gerund verb heads a phrase that is internal to the main VP. Does this mean that $SGC_{C-CAUSE}$ is external? There are reasons to think that this does not seem to be the case. For example, $SGC_{C-CAUSE}$ allows reordering of the gerund clause as shown below.

- (33) El potro sorprendió saltando el corral a todos.
 the stallion surprised jumping the fence to everybody
 ‘The stallion surprised everyone by jumping over the fence’

This data is important because it shows that GP is in complement position in $SGC_{C-CAUSE}$ just as in SGC_C in general since it is typically assumed that reordering is only possible among constituents that are sisters (in this case, complements of the same verb). Hence, it seems that $SGC_{C-CAUSE}$ is still a complement of the main verb.⁴

More generally, we do not want to tie the complement status of GP solely to extraction because, in fact, different subtypes of SGC_C show diverse sensitivity to it. These differences are not random, but they seem partly to be motivated by the lexical properties of the main predicate. In particular, SGC_C subtypes that are likely to permit extraction of internal constituents include those where the main verb is intransitive and can be classified as leading to ‘accomplishment’ or ‘state’ event descriptions; intransitive activities are less likely to allow extraction and, transitive main verbs do not typically consent extraction of the object of the gerund verb as it is illustrated in sentence (34) and (35) respectively.

⁴ Sentence (33) is not as natural as its reordered SGC_{C-CIRC} counterpart, though. That is, (33) sounds marked in the sense that it may require special contexts to be felicitous.

I can see that the evidence for having $SGC_{C-CAUSE}$ under SGC_C is not conclusive. In fact, Fernandez Lagunilla 1999 presents what would be the rough equivalent of $SGC_{C-CAUSE}$ as a subclass of its own.

- (34) ?/* ¿Qué lloró recitando ____?
 what cried reciting
 What did he recite (while) crying?
- (35) *¿Qué construyó la casa cantando ____?
 what built the house singing
 What did he sing while building the house?

These sentences show that extraction out of the gerund phrase is possible only with certain subset of SGC_C ; in fact, the two examples above belong –as the grammatical extraction shown in (18)– to the same subtype of SGC_C , namely to SGC_{C-CIRC} . This shows that extraction is not only impossible for some subtypes of SGC_C but, in fact, the same subtype such as SGC_{C-CIRC} allows it in some instances but not others, which would, then, suggest that the constraint is sensitive to the lexical properties of the (main) verb.

Since extraction seems to be restricted to examples of SGC_C in which the main verb is intransitive, the ungrammaticality that results when extracting the object of the GP in $SGC_{C-CAUSE}$ can be derived from a more general constraint that prevents extracting constituents of the gerund clause if the main verb is transitive. This is illustrated with example (36) below.

- (36) *¿Qué leyó el trabajo usando?
 What read the paper using
 ‘What did he use to read the paper?’

Further, Borgonovo and Needleman 2000 have observed that similar constraints exist in English. They note, for example, that only some intransitive main verbs allow extraction from within gerund phrases, as the contrast between (38) and (39) illustrates.

- (38) What did John walk home reading?
- (39) *What did you cry watching?

Borgonovo and Needleman 2000 argue for two constraints on such extraction. The main verb must be reflexive and the embedded verb has to be in the L-marking domain of the main predicate. The notion of ‘reflexivity’ they have in mind is tied to the presence of an abstract reflexive operator that determines that the Actor and Undergoer are coindexed. Every ergative verb is understood to be reflexive as well as verbs such as ‘make a mistake’ or ‘fall asleep’. A central evidence to categorize that large set of verb classes as ‘reflexive’ seems to be that they are marked with a reflexive in their Spanish counterpart; this does not seem to be a compelling argument, though. This thesis cannot be easily extrapolated to Spanish because there are verbs that are claimed to be ‘reflexive’ -in their sense- which do not allow extraction in Spanish (one example is the verb *equivocarse* ‘make a mistake’).⁵

- (40) *¿Qué se equivocó escribiendo?
 What REF made-a-mistake writing
 What did he make a mistake while writing __? (intended meaning)

Although not restrictive enough for our purposes, it is important to notice that the distinction between intransitive main verbs that allow or do not allow extraction seems to be consistent with the split intransitivity hypothesis (Van Valin 1990). That is, accomplishment intransitive verbs permit extraction of internal constituents of GP

⁵ The basic idea of the Borgonovo and Needleman’s proposal is interesting for Spanish. Their notion of ‘reflexivity’ would imply in many cases the presence of a single entity in the world performing two different and rather opposed semantic (Macro)roles: Actor and Undergoer. Part of the problem is that the meaning of the Reflexive operator is not unambiguous (at least at a non-highly abstract level) and, certainly, it is not ‘reflexive’ in the typical sense. That is, *equivocarse* should be translated to me better as ‘make a mistake’, which does not require the postulation of a reflexive operator in order to describe its meaning.

whereas activities typically do not. For example, every speaker accepts (20), but some speakers would not accept the following expression.⁶

- (41) (?) ¿Qué viajó tu esposo leyendo ____ ?
What traveled your husband reading
What did your husband travel while reading?

In cases where the intransitive main verb is not an accomplishment speakers vary when judging the grammaticality of extracting objects of GPs in SGC_C. But, there are speakers –including the author- that accept extraction even in cases where the main verb is not an accomplishment.

- (42) ¿ Qué caminó leyendo ____ ?
what walked reading
'What did read while walking?

For those who take the sentence above to be ungrammatical, the question would be why is it that intransitive accomplishments can be modified by a complement gerund whereas activities disfavor this reading and transitive verb consistently reject it.

It seems that not every intransitive accomplishment verb in Spanish would allow extraction from GPs in SGC_C. For the moment, I restrict the relevant set of verbs under consideration to those that involve Motion. This is the case of *llegar* 'arrive', *venir* 'come', *entrar* 'enter', *salir* 'exit', and so forth. What makes these verbs a single set is the fact that they describe Motion events with a bounded Path; moreover, the bulk of their lexical meaning describe the final endpoint of the Path (with entailments involving deixis (i.e. 'here') and 'enclosure'). Further, they leave the rest of the Path unspecified as well as information about the Figure or the Manner of Motion, which is in fact where the

⁶ The variation in the acceptance among speakers may be due the fact that the main verb is an 'active-accomplishment', which is a dual semantic status that is attached to different syntactic templates, as

gerund comes in since it gives additional information about the way in which the Path was traversed. In other words, these verbs contain an argument involved in an activity – i.e. self Motion- and, in this regard, are conceptualized as Actors and in a state –i.e. of being located- and, in this regard, are Undergoers.

This set of verbs licensing extraction is similar to the one that typically forms serial verb constructions. Foley and Olson 1985 makes the following typological implicative statement; if a language has serial verb constructions, then it has motion and directional verbs (‘come’ and ‘go’) among the verbs that can enter into the construction; then, if it has any other serial verbs, it should also include posture verbs (‘sit’, ‘lay’, ‘stand’) and, finally, it may also have state and process verbs. The parallel between SGC_C and serial verb constructions is relevant since they share many properties. There is no overt expression of the semantic connection between the two predicates nor is this relation lexically specified. Further, there is an obligatorily shared participant, but the control is not fixed and, hence, it remains open to ambiguities. Interestingly enough, the set of verbs that allows gerunds as complements –namely, directive motion verbs- is consistent with the typological statement presented above regarding applicative structures (I take ‘come’ and ‘go’ to be directed motion verbs and telic). The question would be why the defining property of this set is telicity and intransitivity.

The characteristic property of intransitive telic motion verbs is that they have a single argument, which might be represented as Undergoer, since it is the argument that undergoes a change of state; but it can also be thought of as an Actor because the event include motion toward a Path. As I show in Chapter IV and V later, the semantics of

SGC_C is such that the gerund event overlaps only with the portion of the main event containing the participant as an Actor, not as an Undergoer—which corresponds to the final state-. For example, let's take the verb *salir* 'exit' as in the example below.

- (43) El intendente salió de la municipalidad silbando un tango.
The mayor exited from the City Hall whistling a tango
'The mayor left the City Hall whistling a tango'

The main verb is a telic verb that includes a change of state (strictly speaking, a change of location) of a participant (i.e. the mayor). The portion of the event that has the mayor as an Undergoer is the final part of the exiting event. In contrast, the walking event describes the initial portion of that event; the one that contains the subevent leading to the change of state and that has the mayor as an Actor.

This type of semantics corresponds to a large subclass of SGC_C; namely, the gerund clause describes an activity that temporally overlaps with a subpart of a telic event. Specifically, the gerund interval overlaps with the initial subinterval of the main event, the interval associated with the motion activity leading to the telic point. So, what would be the cause of the difference between accomplishment and activity intransitive verbs in that context? The generalization seems to be that VP-internal trigger verbs are 'inconsistent' intransitive verbs, by which I mean intransitive verbs whose subject argument is both Actor and Undergoer.

The next chapter, which explores the semantics of the construction, captures this property in a more principled way with an asymmetry constraint imposed to the construction. For our purposes here, it should suffice to say that this constraint operates

also on SGC_C with VP in complement positions since it requires the two event descriptions to be asymmetric.

The notions of Actor and Undergoer I have used in this section are not entirely ‘interface’ categories -like some may think is the case in RRG, although it is not necessarily so- but they have some ‘meaning’ attached to them possibly in the sense that Proto-Agents and Proto-Patients have in Dowty 1991. That is, there are some entailments that, if present, are typically associated to Actors and some with Undergoers.

To conclude, it seems that extraction of objects of GPs in SGC_C disfavors structures that contain the same participant having the same Role in relation to two different predicates under the same VP internal domain. In addition to requiring intransitivity, extraction is only possible for Motion verbs if the semantics assigned to the shared participant –the controllee- by the embedded event description contrasts with (one of) the roles assigned to this participant by the main event descriptions.

5- THE ASYMMETRY OF SGC_C

The intrinsic syntactic asymmetry between the GP and the main clause is clear since the former is a complement embedded in the latter. In this section I will explore other aspects of this asymmetry; in particular, I will focus on properties associated with the behavior of the construction regarding a number of operators, their positions and their semantic interpretations. Ultimately, the question is to what extent those properties can be derived from structural conditions.

Let's first examine the issue of grammatical aspect dependency; that is, operators associated with the concepts of perfectivity and imperfectivity. First, the gerund clause cannot be marked by an aspectual marker –like the auxiliary verb *haber* ‘have’ which encodes Perfectivity- in SGC_C (whereas this is possible in SGC_A).

Second, an aspectual marker in the main clause does not have scope over the gerund clause in SGC_C; that is, a perfective aspect in the main clause only determine that the main event has been terminated and, for those event descriptions that are telic, the perfective entails that the main event has been completed but it does not to be so for the gerund event description.

(44) Tu padre ha llegado a casa cantando ‘Cielito Lindo’ \nRightarrow Tu padre ha cantado ‘Cielito Lindo’
 ‘Your father has arrived home singing ‘Cielito Lindo’’ \nRightarrow ‘Your father has sung ‘Cielito Lindo’’

The main clause in (44) contains a telic predicate and a Specified Quantity argument (see Verkuyil 1993); when combined with Perfective markers, telic predicates constitute telic event descriptions denoting completed events. In the example above, *llegar* ‘arrive’ is a telic predicate that is combined with the Perfect and, hence, the sentence entails that ‘Juan has already arrived’ by Speech Time. The gerund phrase also contains a telic –or ‘quantized’- event description and can eventually constitute a completed event description (i.e. *cantar Cielito Lindo*). Now, as will be explained with more detail later- the Spanish gerund morphology contains an imperfective operator and, hence, telic lexical items would not constitute necessarily completed events. In fact, there is no entailment about the completion of the singing event in (44). Juan might have never finished singing the song and (44) may be still true.

Hence, the lack of completion of the gerund event nor termination cannot be affected by the presence of a perfective operator in the main clause. Perfective operators mean ‘termination’ for those event descriptions that are not telic. Since Juan might still be singing the song and (44) be true, we need to conclude that the termination entailment associated with Perfectivity does not hold for the gerund event either.

As was the case for aspect, SGC_C prevents the gerund clause from including an independent negative operator (while this is possible in SGC_A); however, unlike what happened with aspectual marker, a negative adverb in the main clause might have scope exclusively over the gerund clause (i.e. not include the main clause at all).

- (45) Tu padre no llegó a casa cantando ‘Cielito Lindo’
 Your father not arrived to home singing ‘Cielito Lindo’
 ‘Your father didn’t arrived home singing ‘Cielito Lindo’

Sentence (45) typically entails that the father arrived home but he was not singing. That is, negation can scope over the gerund clause and not the main clause. This behavior can stem from the fact that negation is a ‘focus sensitive’ operator and, hence, has scope over the expression in the Focus, which in SGC_C is typically the gerund clause. I conclude that operators that are expressed in the main VP can affect the interpretation of the embedded GP.

Finally, let’s notice that the temporal location of the gerund event is also partially determined by the main verb’s tense. As will become clear in Chapter VII, the gerund form is associated with a ‘defective’ temporal structure in that it does not carry information about the relations of the Event and Reference Time intervals to Speech Time. However, in every SGC_C sentence is clear what the relations are: they are the same as the ones the Tense in the main clause determines. Roughly speaking, the gerund in

SGC_C is associated with a temporal structure in which Event and Reference Times are the same interval and Reference Time overlaps with the main Event Time. Therefore, the Tense in the main clause determines the relation of gerund Event Time to Speech Time. It is, then, apparent that Tense is a temporal operator that determines the interpretation of the gerund clause in SGC_C (but not necessarily in SGC_A as we will see in Chapter VII).

One conclusion that seems to be clear from this survey is that the main clause and the gerund phrase differ in their ability to combine with operators. The main clause can be independently marked by tense, aspect and negation whereas the gerund cannot; further, we saw that some of those operators can have scope over the gerund and determine its interpretation. Therefore, this evidence is consistent with the description of SGC_C as involving two VP structures in a subordination relation.

6. SECONDARY PREDICATION

The analysis of SGC_C I have presented in this chapter can be put in a broader perspective. There are many structural similarities between SGC_C and the Spanish instance of the structure known as ‘secondary predication’ (SP). This section explores how the description of SGC_C can be amended to represent the fact that it is a subcase of SP.

Secondary Predication structures in Spanish can be subdivided into ‘depictive’ and ‘resultative’ predication. In both cases, an adjective phrase (AP) is syntactically dependent on a preceding main clause while predicating a property of one of its main clause syntactic arguments. Furthermore, ‘depictive predication’ does not seem to be lexically restricted to some main predicates whereas ‘resultative predication’ is; in fact, reduced to a very small subset of Spanish verbs.

Sentence (46) illustrates the subtype ‘depictive predicate’ of SP; sentence (47) illustrates ‘resultative predication’.

- (46) Juan trajo (fría) la comida (fría).
 Juan brought (cold) the meal (cold)
 ‘Juan brought the meal cold’
- (47) Laurita dibujó (torcido) el árbol (torcido).
 Laurita drew (leaning) the tree (leaning)
 ‘Laurita drew the tree leaning’

These examples show that the adjective in SP might appear in two optional positions, which resembles the distributional range of adverbs and the gerund in SGC_C as shown in (22) and (21) above, respectively.

The secondary predicate consists of an optional constituent –i.e. the adjective phrase (i.e. *fría*)- that is predicated of one of the core NP arguments in the main clause. That is, it cannot be predicated of any adjunct element nor of any core non-direct (or non-Macrorole) argument as shown below.

- (48) Juan_i le_k dió al médico_k el bebé_j desnudo_{i/j/*k}
 Juan him-DAT to-the physician the baby naked
 ‘Juan gave the doctor the baby naked’

The predicate *dar* ‘give’ is a three-place predicate that contains the Recipient of the action as a syntactic argument. However, the Recipient argument is not a direct argument and, in consequence, the secondary predicate cannot predicate of it.⁷ Further, the sentence above also shows that the adjective need not be predicated of any specific direct core argument; the property can be predicated of either the Actor (i.e. *Juan*) or the Undergoer

⁷ The position of the recipient ‘Pedro’ is marked (between the verb and its direct object) in order to avoid a structural ambiguity that would be irrelevant for our purposes here. That is, the Recipient NP preceding the secondary predicate can allow a reading where this predicate is interpreted within the NP just like a restrictive relative clause.

(i.e. *el bebé*). Hence, SP is an obligatory but non-fixed control construction just like SGC_C.⁸

In addition, the fact that the AP needs to agree in gender and number with the controller (even when it is the subject of the main verb) is an additional piece of evidence for a ‘control’ treatment of SP.

- (49) La enfermera trajo a la paciente *dormido
 the nurse-FEM brought to the-FEM patient asleep-MASC
 ‘The nurse brought the patient asleep’

The ungrammaticality of (49) is due to the lack of agreement between the adjective and its argument, which could be either the subject or the object of the main clause. This shows that agreement is required by the construction and, further, by looking at (48), we can see that, for example, the agreement with the subject of the main clause would be a rather impractical long distance agreement if it is not assumed that GP is not in complement position and, hence, it is a control structure just like SGC_C.

It should be stressed that SGC_C behaves similarly regarding the selection of the controller although agreement is not an issue in this case due to the fact that gerund forms cannot bear subject agreement morphology.

- (50) Juan_i le_k dió la criatura_j a Pedro_k caminando_{i/j/*k}.
 Juan him-DAT the child to Pedro walking
 ‘Juan gave the child to Pedro while walking’

⁸ The debate in Principles and Parameters regarding SP has been maintained around two competing positions; namely ‘predication theory’ and ‘small clause analysis’. The proposal known as ‘predication theory’ (Williams 1981) rests on the principle that every predicate needs a subject. It has been assumed (Contreras 1987, Legendre 1997) that this principle determines an analysis of SP where the NP and the AP form a constituent (i.e. the sequence *comida fría*). On the contrary, Contreras 1987 and Legendre 1997 have argued that NP-AP is not a constituent and, hence, SP needs to be analyzed as a ‘control structure’. In terms of the Government and Binding tradition, this means that the AP is part of a clause (a Small Clause in this case) that contains an unexpressed subject controlled by a syntactic argument of the main predicate.

Therefore, SGC_C and SP are both optional constituents predicated of a direct argument in the main clause. Further, they are both obligatory non-fixed control constructions in the sense that the argument of the adjective phrase is necessarily a direct (i.e. Macrorole) argument of the matrix verb but it can be either the Actor or the Undergoer.

Finally, sentences that can be analyzed as SP display the same sort of structural ambiguities that SGC_C in the sense that the adjective phrase in final position in a sentence like (44) can be alternatively interpreted as being part as a modifier of the NP headed by *comida* ‘meal’ or it can have the SP reading analyzed above. In the case of the NP reading, the adjective is semantically interpreted as part of a definite description. This is also one of the possible readings of the gerund in sentence (51) below; *los niños corriendo* constitutes an NP that describes entities without any temporal constraint.

- (51) Juan encontró a los niños corriendo en el jardín.
 Juan found to the kids running in the garden
 ‘Juan found the kids running in the backyard’

It cannot come as a surprise that the gerund can also be part of an NP -like an AP- given the dual origin of the Spanish form, which comes from the Latin Ablative and the present participle (Fernandez Lagunilla 1999). The gerund behaves just like an adjectival form given the overlapping distribution of participles and adjectives in languages that have both forms. Further, in chapter IV I show that adjective SPs and gerund SPs are both characterized by the same semantic constraint that I name ‘Circumstance Sharing’.⁹

⁹ The semantic difference between the NP-reading of the gerund and the SGC_C reading that concerns us here is apparent in relation to their temporal interpretation. In the NP reading there is a set of kids that are running at Speech Time; that is, the gerund inside of the NP does not have a temporal location restricted by the Tense of the main VP; the temporal interpretation is rather pragmatically constrained. In contrast, the SP reading the gerund clause describes an event that is asserted to have taken place during the interval of time where the main event was taking place also. In consequence, if the main event locates its interval in the Past, the interval of the gerund event is constrained to have taken place in the Past. The fact that the assertion in SP –and SGC_C– is relative to the stretch of time associated with the Event Time of the main

In spite of all its similarities, there is a distinction between the interpretation of the AP in SP and the GP in SGC_C that seems to be determined by their temporal properties. The AP describes a property -and, hence, it describes a state; in contrast, the gerund phrase in SGC_C typically denotes an event (in the restricted sense of activities and telic eventualities). This distinction has semantic consequences that will be analyzed in detail in chapter VII.

The similarities that have been described so far allow us to equate the structures of SGC_C and SP. The preceding section has argued for an analysis of SGC_C that presents the gerund clause as a VP complement to the main clause and, from our analysis so far predicts that this should be also the structure that corresponds to APs in SP.

The critical evidence in favor of the GP-complement analysis was extraction and reordering; in relation to reordering, sentence (46) shows conclusively that it is possible to reorder the AP and the complements of the main verb in SP. In turn, sentence (53) shows that extraction of the complement of the AP is also possible for SP.

(52) El capitán renunció orgulloso de sí mismo.
 The captain resigned proud of himself himself
 ‘The captain resigned proud of himself’

(53) ¿De quién renunció orgulloso el capitán?
 of who(m) resigned proud the captain
 Of who(m) the captain resigned proud of?

Based on this evidence, I conclude that the predicative phrase in SP is a complement of the main clause just as GP is a complement in SGC_C.

7. THE SYNTAX OF SGC_A.

verb is consistent with the fact that SP does not accept AP containing ‘individual state predicate’; the

There is another subtype of SGC besides SGC_C that I have called SGC_A (for ‘adjunct’).

These two subtypes have very different properties; in fact, they only share the presence of a dependent gerund form and differ in every other syntactic and semantic aspect. From a semantic perspective, the relation between the main event and the gerund event in SGC_A is ‘external’. This means that each predicate is used to describe different events, which are ordered in a sequence and connected by a relation that is external to both events such as ‘consequence’, ‘condition’, ‘temporal’, ‘adversative’, ‘concessive’.

SGC_A is exemplified by the sentence below, which expresses a relation of consequence between two events. The ‘abandoning’ event is a consequence or effect of the ‘leaving’ event.

(52) Algunos diputados se escindieron del bloque, abandonando a sus viejos compañeros.
Some representatives REF separated from the party, abandoning to their old comrades
‘Some of the representatives left the party, abandoning their old comrades’

The first property that should be noticed is the presence of a pause (i.e. comma) between the two clauses; this pause is impossible in SGC_C whereas is typical in SGC_A (although non obligatorily present) and it constitutes an unambiguous sign of a looser syntactic dependency between the gerund phrase and the main clause that in SGC_C. In SGC_C there cannot be a pause between GP and the main VP unless GP has been preposed for information structure reasons, and even in this case, this pause is not obligatory.

Furthermore, SGC_A allows the gerund phrase to include an expressed subject as shown in sentence (55).

(55) Abandonando el líder a sus compañeros, algunos diputados se escindieron del
abandoning the leader to their comrades, some representatives REF separated from-the
bloque.

predication in SP seems to be intrinsically defined as a ‘stage’.

party

‘The leader abandoning their old comrades, some of the representatives left the party’

In contrast to SGC_C , (55) shows that SGC_A can express the subject of the gerund phrase constitutes a more independent embedded structure in relation to the main clause. Neither the arguments of the gerund predicate nor the semantic relation between the events is determined by the main clause. This piece of evidence suggests that the gerund in SGC_A constitutes typically a higher structure than a VP –i.e. a clause- and that presumably this clause is not a complement of the main verb.

Structures like the one illustrated in (55) have been termed ‘absolute construction’ as opposed to same subject structures such as (54), which have been in turn labeled ‘free adjuncts’ (Stump 1985). The meanings of both constructions are the basically the same in that the relations between the events are identical; as will be shown in Chapter VI, the only differences is that SGC_{A-FREE} (for ‘free adjunct’) allows for a subset of the semantic relations that are possible in SGC_{A-ABS} (for ‘absolute’). Hence, since the same semantics is present in two construction that are identical in every other respect but the possibility of expressing the subject, then we should conclude that the construction is basically the same and it is characterized for the optional possibility of overtly expressing the subject or not. At most, we may say that SGC_A has typically an embedded gerund clause but it may have also an embedded VP in some context. As opposed to SGC_C , the subject cannot be a syntactic position for the embedded clause.

It is easy to predict that SGC_A does not allow extraction out of the gerund clause (as it proved to be possible for SGC_C) given the presence of an obligatory pause between the clauses. Further, the gerund clause cannot occupy an intervening position between the

verb and its direct object as it was the case in SGC_C ; this is attested by the ungrammaticality of the sentence (56) shows.

- (56) *El líder interrumpió, ocupando territorios, el proceso de paz.
The leader interrupted, occupying territories, the process of peace

The typical pause separating the two clauses indicates, as mentioned earlier, that the position of the gerund clause in SGC_A is different from, for example, the fronted position of Wh-words in Spanish or English and, in general, the position of so -called ‘topicalized’ constituents do not require a pause after them as fronted gerund clause in SGC_A do, which can be seen in (57).

- (57) Habiendo invadido territorios, fue el líder el que interrumpió el proceso de paz.
Having invaded territories, was the leader the what interrupted the process of peace
‘By invading territories It was the leader that stopped the peace process’

This sentence contains a clefted constituent; further to its left there is a dependent gerund clause. It seems that this gerund clause should only be possible if it occupies a different position than clefted constituents. This position might be thought as an adjunction to CP in the Principles and Parameters framework, but it can also be thought as an independent syntactic domain (‘a different phrasal projection’ in terms of the Principles and Parameters tradition). This is what RRG does by having a Left detached position rather for the gerund clause rather than having it in the pre-core slot.

A central distinction between SGC_A and SGC_C is that only the former allows the gerund phrase to be modified by independent operators, such as aspectual or negative operators as illustrated in sentence (58) below.

- (58) No abandonando a sus viejos compañeros, los diputados mantuvieron el bloque.
No abandoning to their old comrades, the representatives kept the party
‘By not abandoning their old comrades, the representatives kept the party united’

Further, sentence (59) shows that the gerund phrase can be modified by an aspectual operator.

- (59) Habiendo invadido territorios, el lider está interrumpiendo el proceso de paz.
 Having invaded territories, the leader is interrupting the process of peace
 ‘Having invaded territories, the leader is interrupting the peace process’

The perfect operator modifying the gerund event description determines that the ‘invading’ event has been completed. That termination and completion occurred must be due to the perfect marker in the gerund phrase since the main clause is modified by a progressive operator, which entails precisely that the interrupting event might be still going on long after the main event ended.

Finally, it will be illustrative to look at operators that are typically assumed to have scope over the whole clause such as tense. As it is illustrated in (60), the construction allows both clauses to be independently interpreted in relation to temporal location.

- (60) Habiendo gastado todo su dinero, Juan encontrará dura su estada en NYC.
 Having spend all his money, Juan find-FUT hard his stayed in NYC
 ‘Having spend all his money already, Juan will find hard his stayed in NYC’

The gerund event took place in the past whereas the main event will take place in the future; this clearly show that the Tense in the main clause does not determine the interpretation of temporal location of the gerund event, showing that the main clause Tense does not have necessarily scope over the gerund phrase. The opposite conclusion was drawn from the analysis of SGC_C .

This survey on the behavior of GP in SGC_A shows a greater independency between the phrases of the predicates in relation to SGC_C .

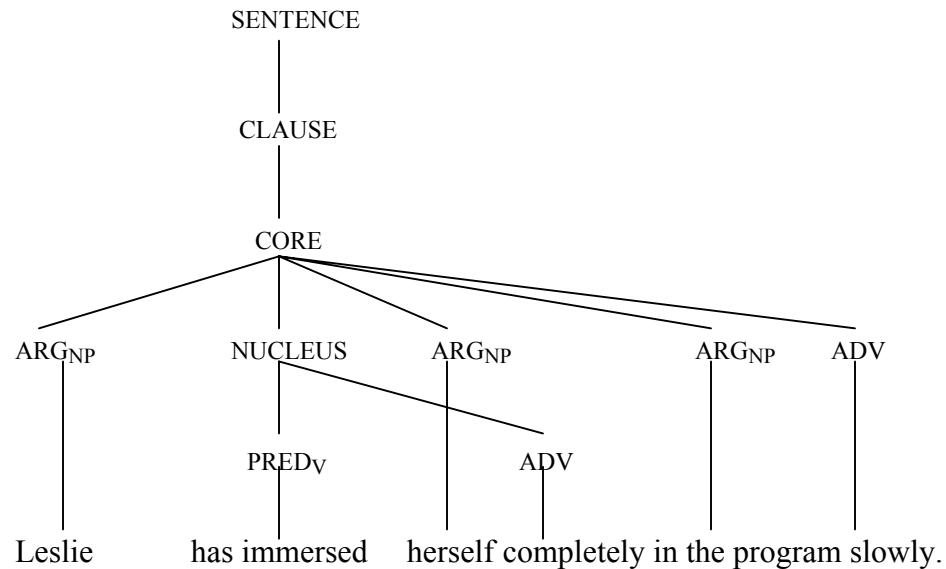
8. THE DESCRIPTION OF SGC_C IN TERMS OF TWO SYNTACTIC FRAMEWORKS

8.1.ROLE AND REFERENCE GRAMMAR (RRG)

The data I have presented in the preceding sections indicates that the gerund phrase in SGC_C is in a complement position in the main clause despite being a non-lexical required constituent. The gerund phrase seems to share some properties with complements –in relation to the syntactic dependency to the main clause and the fact that GP introduces a structure of participants- and yet others with typical adverbs and adverbial phrases (i.e. being non-lexically required and being in a ‘modifier-like’ relationship).

The similarities and differences between, on the one hand, gerund and adverbial phrases and, on the other hand, gerund and complements can be captured by analyzing the gerund clause with the same treatment assigned to adverbs in Van Valin and LaPolla 1997:167.

(61)



The structural description in (59) presents the adverb as a core internal constituent. The core is the syntactic domain of the sentence where the *Completeness Constraint* is satisfied; that is, it is the syntactic environment that contains the expression of every semantically required argument of a predicate. In consequence, the Core typically hosts syntactic elements that semantically are in an argument-predicate relation. The adverb in (61) is atypical in two senses. First, it does not hold a predicate-argument relation with the main verb but a ‘modification’ relation. Second, it is not a lexically required element but an optional modifier.

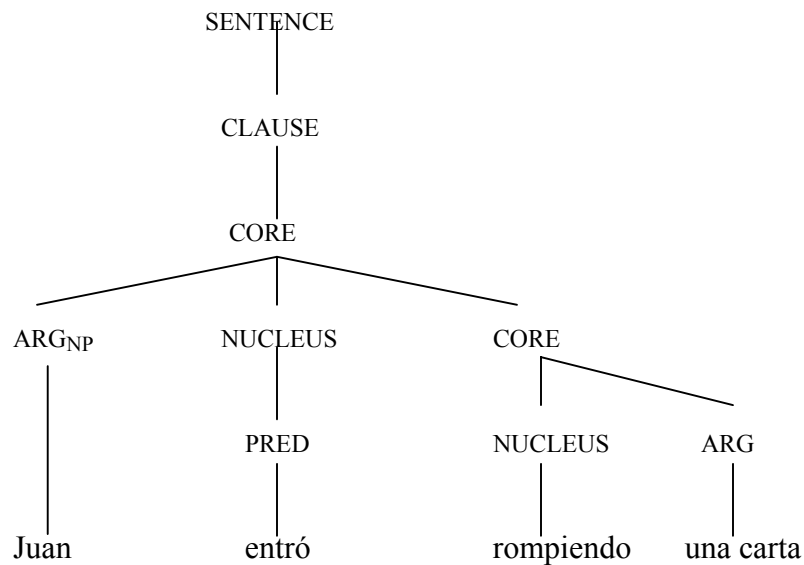
The reason to posit the adverb within the Core is that it intervenes between Core-constituents quite naturally; in this respect it behaves like the gerund phrase in being freely reordered with direct objects.

Unlike adverbs, the gerund phrase contains an argument structure and, hence, the question is which form the interaction between the gerund argument structure and the main verb argument structure takes, by which I mean specifically their interaction in

relation to syntactic structures that involves relations among syntactic arguments such as the realization of arguments into syntactic functions, anaphoric relations and/or passivization. This issue does not seem to be problematic since the gerund is itself a Core and, hence, the semantics of the verbal item is realized into syntax via a linking process that is independent of the linking that determine the realization of the main verb's arguments.

Representing the gerund phrase in the same way that adverbs can help us to derive its fundamental properties when applied to SGC_C . These properties as presented thus far can be consistently described by treating GP with the same structural properties than adverbs –although with a different categorial status. Representing them as adverbs (i) predicts the behavior of the gerund regarding extraction since it is represented it as a core internal constituent; (ii) represents its optional status.

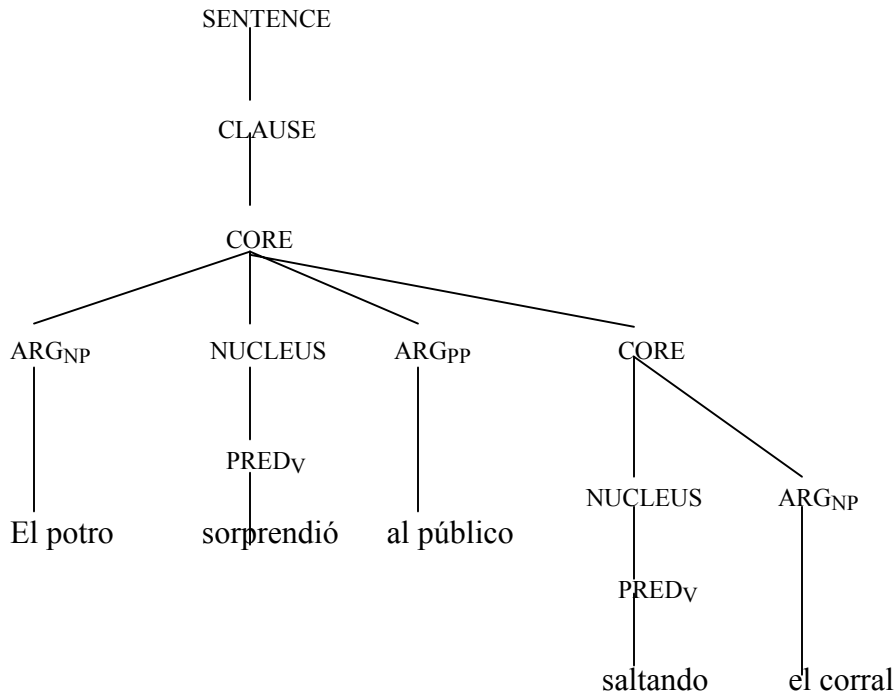
(62) SGC_C as a core internal argument.



The gerund phrase is a Core whose Nucleus has all its argument position in its semantics linked to syntactic position. In turn, it is embedded under another Core, the one that contains the semantic arguments of the main verb.

The same analysis is given to $SGC_{C-CAUSE}$ as shown in (63) below.

(63) $SGC_{C-CAUSE}$



Role and Reference Grammar has a dimension other than juncture to describe the relation between the structures of two predicates that combine into a complex sentence: the theory of ‘nexus’. This theory proposes that the juncture joining the predicates can be of three types: coordination, subordination or co-subordination. Coordination is the joining of two syntactic structures such that the internal properties of each of these structures are entirely independent from the other. They might be externally connected by a clause-linkage element (i.e. a conjunction or complementizer); the corresponding semantics of this nexus type is very much reflected by the syntax since it consists of two independent events externally connected by a semantic relation (usually denoted by a

conjunction). Just to name a few, this relation might be temporal, conditional or consequential.

In contrast, subordination is a nexus that expresses a relation between two predicates such that one of them typically functions as an argument of the other. The semantic relation between the two predicates is determined by the main predicate; further, the information regarding temporal location, aspect or modality that affects the main predicate also affect the embedded one.

Finally, co-subordination is a relation between two predicates that are independent in some syntactic respects -such as their respective constituent structure- whereas they are dependent with respect to operators. In particular, co-subordination requires predicates to share every operator that modifies the syntactic level at which those predicates have been joined.

Given these brief definitions of nexus relations above, the nexus in SGC_C seems to be best described as a subordination relation. Let's first examine the issue of operator dependency. RRG establishes that operator sharing is irrelevant for subordination. This can be checked in relation to aspect –which means ‘grammatical aspect’ in the sense of the concepts of ‘perfectivity’ and ‘imperfectivity’. Aspectual operators should be shared if the nexus is co-subordination since the juncture is core and aspect modifies nuclei. Now, the gerund clause in SGC_C cannot be marked independently by an aspectual marker –like the auxiliary verb *haber* ‘have’ which encode Perfectivity-. However, an aspectual marker in the main clause does not have scope over the gerund clause; as illustrated in sentence (44) above that I repeat below.

(44) Tu padre ha llegado a casa cantando ‘Cielito Lindo’ \nRightarrow Tu padre ha cantado ‘Cielito Lindo’
 ‘Your father has arrived home singing ‘Cielito Lindo’’ \nRightarrow ‘Your father has sung ‘Cielito Lindo’’

Similarly, since the two predicates are combined at the level of the core and internal negation modifies precisely the Core, then internal negation should be shared if the nexus is co-subordination. As with aspect, SGC_C prevents the gerund clause from having an independent negative operator; however, unlike the aspectual marker, the negative adverb in the main clause might have scope over the gerund clause and not over the main clause, as can be seen in sentence (45) repeated below.

(45) Tu padre no llegó a casa cantando ‘Cielito Lindo’
 Your father not arrived to home singing ‘Cielito Lindo’
 ‘Your father didn’t arrived home singing ‘Cielito Lindo’’

This sentence typically entails that the father arrived home but he was not singing ‘Cielito Lindo’. That is, negation has scope over the gerund clause but not over the main clause. The behavior of negation in relation to SGC_C shows that the negation operator is not necessarily shared. Hence, the nexus cannot be cosubordination since this type of nexus requires by definition that all the operators that modify the relevant level at which the predicates combined –in this case the Core- should be shared.

Since SGC_C is an obligatory control construction, the nexus cannot be coordination either for there is a (referential) dependency of one of the arguments of the gerund on one of the arguments of the main predicate. Because this dependence is intrinsic (i.e. obligatory), the two structures cannot be said to be independent in the sense that their semantics requirements are realized independent of each other, as is required by coordinated constituents and SGC_C lacks it.

All the evidence indicates that the nexus of SGC_C is ‘subordination’; therefore, we shall represent the structure of SGC_C as we have done in (61).

8.2. SGC_C IN HEAD-DRIVEN PHRASE STRUCTURE GRAMMAR (HPSG)

HPSG is a context-free phrase structure grammar that regards every linguistic expression as a *sign*: a coupling of syntactic, semantic, pragmatic and phonological information. One characteristic property of this theoretical framework is the idea that grammatical categories are best represented as a structured array of feature structures. Each feature structure is a set of attributes and possible values for those attributes that describe an aspect (for example, the combinatory potential) of a category. Further, these feature structures are *typed*, which intuitively means that they are organized into classes such as *word*, *phrase*, *noun*, *prep*, *verb*, and so forth that constitutes the ‘ontology’ of the grammar. Each type is associated with a different feature structure. For example, the feature structure associated with a verb looks like (62).

(62)

	<i>bring</i>	
	HEAD	<i>verb</i>
SYN	SPR	<① NP>
	COMPS	<② NP>
SEM		
ARG-ST	< ①, ②>	

This structure is a simplified description of what a verb lexical entry would look in HPSG. The information is organized into attributes whose values can be attributes themselves; for example, the attribute SYN (for syntactic information) has the attributes HEAD, SPR (specifier or subject), and COMPS (complements); the ARG-ST attribute

contains as its values the list of syntactic phrases that are relevant for binding an anaphora.

The grammar works basically with a small set of principles and grammar rules that constrain the possible combination of signs through ‘unification’, an operation that merges two feature structures with consistent information into a larger one that contains the information in both. Among the basic principles, the Head Feature Principle is crucial because it ensure that the relevant properties of the mother coincide with the relevant properties of the head-daughter. The Head-complement principle requires the sign to combine with signs that have the properties specified in the COMPS list.

HPSG has expressed the argument/adjunct distinction by assuming that predicates contain a partial representation of their arguments in their valence lists—specifically, in the COMPS and/or SPR list-, which are the attributes that specify the elements which need to be combined with the head in order to have a resolve feature structure. In contrast, adjuncts contain the feature MOD whose value is a partial representation of the element the adjunct modifies. This is the feature that characterizes some ‘adverbs’ whereas others are treated as complements.

In short, what is traditionally called a syntactic argument of a predicate is represented in HPSG by assuming that such elements are partially represented in the SPR or COMPS list of the predicate. Adjuncts are not listed in the predicate but rather they have a partial representation of the predicate adjunct modify as the value of their MOD attribute.

In addition, we need to say something about the description of ‘extraction’ in this framework. It has been described in terms of a lexical rule that extracts an argument from

the COMP list. In turn, a SLASH feature list should contain a value that corresponds to the extracted element and that would pass up from daughter to mother structures until cancelled by, in the case we are dealing with, a wh-phrase.

More recently Bouma, Malouf and Sag 2001 (hereafter, BMS 2001) have proposed a different approach. It is argued in BMS 2001 that the sign needs to be endowed with a new list, the ‘dependence’ list or DEPS, which include all the phrases in the syntactic domain of the head. Roughly, the sign of a verb contains now an ARG-ST list, which defines the domain of anaphoric relations. A COMPS and a SUBJ lists express the combinatory requirements of the word; and, finally, the DEPS list contains every syntactic dependent of the word.

Particularly relevant for us here is the fact that the list of elements in the syntactic domain of a head do not coincide with the list of the expression’s syntactic arguments. This strategy makes transparent what has been a long-standing observation (cf. Hukari and Levine 1995), namely that the list from which extractable elements originate does not reduce to syntactic arguments. Thus, DEPS contains every element in the ARG-ST list, plus extractable adjuncts.

The DEPS list introduced in BMS 2001 allows us to have a transparent representation of what we have called the complement-VP gerund phrases in SGC_C . It states that the verb may contain a potentially unlimited list of dependents. The complement-VP gerund would then be represented in the DEPS list and, hence, we can describe the extractability of its direct object as in sentence (20).

This approach also allows us to differentiate the complement SGC_C from the adjunct gerund SGC_A in that the latter does not have the gerund phrase listed in the DEPS

list and, hence, it does not behave like an argument for the purposes of extraction. In addition, this analysis would properly distinguish SGC_C from complex predicates; the argument of the two predicates in a complex predicate structure are represented through the composition of their ARG-ST list, since cliticization or passivization target the ARG-ST list, the fact that SGC_C does not allow clitic climbing or non-local passivization is correctly represented.

9. CONCLUSION

In this chapter I have shown the structural properties that distinguish SGC_C and SGC_A which essentially derive from the different position of GP in relation to the main clause; namely, GP is a complement in SGC_C and a peripheral constituent in SGC_A .

The description has centered in the less predictable structure; namely, I have focused on SGC_C because the structural properties of the gerund phrase do not accommodate to standard grammatical assumptions. It is a shared assumption among different theoretical frameworks that what can be called ‘core syntax’ is essentially the syntactic realization of the semantic requirements of a lexical predicate. Among the relations found in this ‘core syntax’, the relation between a complement and its head or nucleus is the strongest one in terms of dependencies.

Interestingly enough, I have shown the gerund phrase is not part of the meaning of the main predicate but behaves as a syntactic complement. It is a typical assumption about the syntax-semantics interface that the strong syntactic dependency of the complements to its predicates correlates with a strong semantics connection; roughly, it is expected that the complement is part of the meaning of the predicate; in other words,

complements are typically lexically encoded. This is not intuitively true of SGC_C since the event described by the gerund is not necessarily dependent on the main event (e.g. the construction does not necessarily express events that are causally related). Having this semantics in mind, I have concentrated in this chapter in arguing for a description that show GP as a complement on the basis of two facts: the behavior of GP in relation to extraction of its internal constituents and to its ability to be reordered with the syntactic arguments of the main predicate. I take that these facts constitute unequivocal evidence that GP is a complement in SGC_C ; the following three chapters on the semantics of SGC_C should show that the complement status correlate with mereological relations between the events described by the main and the embedded clause.

Different theoretical frameworks can capture the properties of the GP in SGC_C , by which I mean that they can both capture the fact that it behaves as an internal constituent of the main VP but it differs from those constituents in that it is not lexically required.

RRG can represent SGC_C within the Core as a direct argument that does not represent any semantic argument. This is not an ad-hoc description, but this type of structure is independently motivated in the behavior of adverb phrases (i.e. phrases headed by adverbs). The main difference between adverb phrases and GPs is that the latter introduces a structure of arguments (i.e. a Core) and these arguments can hold relations with the arguments of the main predicate whereas adverbial phrases are simply modifiers.

There have been different proposal within HPSG in recent years that allows us to describe SGC_C without resorting to a new descriptive device. In particular, I have suggested that Dependents list is the natural site to list the gerund phrase in SGC_C since

this list holds all the constituents that behave as syntactic complements regarding extraction even if they are not necessarily listed in the COMP list nor in the ARG-ST list.

CHAPTER III

HYPERINTENSIONALITY: THE LEXICALIST CRITERION ON EVENT IDENTITY

1. INTRODUCTION

This chapter has a preliminary status; it constitutes an attempt to clarify an ontological issue that is a necessary task preliminary to the description of the semantics of SGC. The defining characteristic of the meaning of SGC resides on the nature of the semantic relation it establishes between the event descriptions expressed by the main clause and the gerund phrase, respectively. The event descriptions contained in the subtype SGC_C can be understood –and has been understood by some scholars- as describing the same individual event. Just as it is possible to have two different definite descriptions of the same individual entity, those two event descriptions describe the same individual event according to those scholars. In contrast, I claim that the two event descriptions are associated with different events that are mereologically related and, in consequence, can be said to describe subevents of a larger complex event.

It is important to stress that deciding between these claims has important descriptive consequences. If the single event hypothesis is right, there is no need to ask about the meaning of the relation between the two events that are described by each phrase, since the fundamental question has been already answered; namely, they describe the same event. But, if the events are different, the characterization of the relation between them becomes pivotal for the understanding of SGC. Furthermore, if the descriptions denote the same event, it does not make sense to wonder about the

constitution of a larger or more complex event out of the two subevents whereas this becomes a central issue if SGC involves two different eventualities.

The way I try to resolve the debate in this chapter is by offering a criterion on event identity. The rationale is that if the two event descriptions denote the same event, they will satisfy the criterion on event identity; otherwise, the two event descriptions denote different events and the question is what the relation is between those events. I propose a norm on event identity that I dub ‘the lexicalist criterion’ because it basically matches each verb in a sentence with one event in the world. More precisely, each verb with the relevant arguments and after existential closure of the event variable, identifies an event in the world that no other event description generated out of a different verb can identify. In other words, the event description associated with a verb describes an event that cannot be identified by a description associated with a different verb.

There are other well-known and respectable proposals in the philosophical literature on event identity; one justly valued was made in Davidson 1967. Roughly, it says that two events are identical if they have the same causes and effects. No matter how truthful this criterion might be from a philosophical perspective, it is linguistically impractical since it would be a timeless task to determine what are the causes and effects of every single event type associated with each verb. It seems more reasonable to think that speakers judge if two expressions describe the same or different events on more intuitive and general grounds than a case by case analysis. This is where the lexicalist criterion can make a contribution to the problem of event identity.

In light of the proposed lexicalist criterion I claim that there are two events involved in any SGC_C construct since it contains two different verbs. Once this issue has

been solved, the following chapters describe the different event relations involved in SGC. Ultimately, the research conducted in this and the next two chapters can be viewed as part of a broader project on the semantic constraints for the compositions of larger events out of simple events.

2. THE LEXICALIST HYPOTHESIS ON EVENT IDENTITY

The semantics of SGC consists in the establishment of a relation between a main predicate and a gerund. Thus, in sentence (1) below, the hearer needs to know what the semantic relation between *entrar* and *correr* is.¹⁰ It is customary among descriptive grammars –Fernandez Lagunilla 1999 for example- to claim that sentences such as (1) – representing the subtype SGC_C of SGC- contain two descriptions of the same event.

- (1) Juan entró a su oficina corriendo.
Juan entered to his office running
'Juan ran into his office'

The notion of event as used in this context is intuitive -rather than based on the ontology of natural language semantics; it basically means that *entrar corriendo* constitutes an individual event. The fundamental problem with this position is not that is wrong but rather that it can be interpreted in several ways, some of which contradicting each other about the ontology of natural language semantics. For example, it could mean that *entrar corriendo* is the name of a set of individual events as much as a common noun is the arbitrary label of a set of individual entities. This interpretation is clearly wrong; it misses the fact that *entrar* and *correr* have meaning on their own and speakers combine them under SGC_C because of their meaning.

Yet another interpretation of the claim made by descriptive grammars can be understood in terms of what I call ‘the single event semantics’ of SGC_C. In one instantiation of this view each clause is associated with a proposition and the two propositions in SGC_C describe the same event. Presumably, the two propositions in SGC_C describe different ‘properties’ of the event; still, the crucial element in the speaker’s intuition is that those properties of the event are semantically related; the single event semantics misses this point entirely. Similarly, it is sometimes said that each description captures different ‘aspects’ of the same event. Thus, for example in König 1995(:65) it is said for the equivalent of SGC_{C-MEANS} in French, that ‘...The former term [Manner] should only be used for sentences describing two aspects or dimensions of only one event ...’ and, then, proceeds to give the following examples to illustrate his point.

(2) French

- a. Elle traversa le fleuve en nageant.
 she crossed the river swimming
 ‘She swam across the river’

Italian

- b. Grazie, disse balbettando.
 Thanks he said stammering
 ‘Thanks, he stammered’

Hindi-Urdu

- c. sisak-sisak-kar roo-na
 sob-sob-conv cry-inf
 ‘To cry sobbingly/to sob’

English

- d. Now Kirk, talking enthusiastically, like a football coach, tells the press that the

¹⁰ I will use the category Event to cover both States and Events, unless specifically indicated to the contrary.

Kennedy forces are picking up a great deal of support on the vote on the rule.

Part of the problem with König's view is that the notion of 'aspect' itself is obscure. What do we mean by an 'aspect' of an event? König 1995 does not give an answer to this question, hence, the notion of 'relations among aspects of the same event' is also missing.

A different interpretation of the 'single event semantics' could be that each clause contains an event description, the main clause is associated with $\delta(e_M)$ and the embedded clause with $\delta(e_G)$.¹¹ Hence, the relation between those two descriptions is of extensional identity; that is, both event descriptions denote the same event. What does this mean? It may mean that $\delta(e_M)$ and $\delta(e_G)$ denote independently the same event; namely, they are basically synonymous expressions. Since they are information-wise diverse, this theory presupposes that two different descriptions can identify the same individual entity in as much as different nominal expressions can be descriptions of the same individual. It will become clear later in this chapter that there are fundamental reasons for rejecting this assumption.

The description of the semantics of SGC_C that will be proposed in this thesis is, first, that every predicate is part of a phrase that denotes a single event and, second, that those events are semantically related such that they constitute a composed event that we can call Macro-event, which is understood as a complex eventuality. In fact, the semantics of SGC_C should shed light on the broader issue of the (semantic) conditions under which two different events can constitute a single (complex) eventuality or Macro-event.

¹¹ An event description is constituted out of the main verb lexical entry by adding the semantics of the noun phrases in their appropriate argument slots and an event variable.

This is the underlying assumption of chapter II; namely that the syntax of SGC_C contains GP as a complement because it constitutes with the main clause a single Macro-event. The lexicalist criterion determines *a priori* that the relation between the events that constitute the Macro-event cannot be ‘referential identity’; but merely ‘mereological’ – i.e. a ‘part-whole’ relation. In other words, the meaning associated with the gerund predicate does not contain an event variable that can be bound by or identify with the event described by the main clause. The sort of anaphoric-like relation demanded by the constitution of a Macro-event involves semantic connections between the content of the respective event descriptions. In the following chapters I describe those semantic relations and propose that they act as semantic constraints on the constitution of Macro-events.

The semantics of SGC_C I propose is dependent upon the presence of two different events (constituting a larger one). In contrast, the ‘single event semantics’ assumes (in a somewhat obscure way) that there is a single event. This chapter is devoted to the exposition of the underlying criterion that is consistent with the hypothesis of the presence of two events.

This discussion on event identity from a linguistic perspective is relevant also from a cross-linguistic perspective. Chapter II briefly suggested a number of structural parallels between SGC_C, converbs and serial verb constructions. For example Bisang 1995 (p. 155ss) points out a number of similarities and distinctions between the converbs and serial verb constructions such as the one exemplified by sentence (3).

(3) Japanese

Uta o utat-te iki-mashi-ta
song ACC sing-CONV go-HON-PAST
'He went along singing'

Again, under the criterion on event identity supported in this thesis converb constructions –like the one above- constitute a relation between two events.

3. A DEFINITION OF THE CRITERION

I propose that languages have a principled way of deciding about the presence or absence of an eventuality. The event description constituted out of a lexical verb form denotes a non-necessarily actual event that cannot be denoted by any other event description out of a different verb. I call this regulatory principle 'the lexicalist criterion'. The lexicalist criterion makes rather standard assumptions on meaning. The lexical entry of each verb contains an event variable argument in its semantics, which is minimally described in terms of a relation (function) and an argument. By functional application, arguments take their place in the verb meanings; under existential closure of the event variable –for example, by Tense-, this representation constitutes an *event description* (Krifka 1998). An event description is an intensional object in Frege's sense; that is, it is an object that contains information determining the set of individuals that can be the value of the event variable. In so far as each verb is associated with a different event description, the lexicalist criterion predicts that each entry allows the identification of an event that cannot be identified with a different lexical entry. More precisely, each verb is associated with a description that under existential closure constitutes *the description of an individual event* and, no other verb can be a description of the same individual event.

Each verb contains relations in its lexical entry that make the event description associated with it unique. This uniqueness means that they select individual events in the world that cannot be coupled with event descriptions associated with a different verb.¹² In sum, every verb constitutes the basis of an event description able to pick out an individual event in the world that cannot be picked out by any other event description in the linguistic system.

The point can be illustrated with an example. Let's assume that we attended a function at the Met and we report our experience with the following example.

(4) Jose Cura was singing.

(5) José Cura was working.

Since José Cura is a professional singer, he was working while singing. We might be lead to think that we experience a single eventuality and, hence, those two descriptions denote the same event. The lexicalist criterion makes the opposite claim; namely, that these are two different events captured by two different event descriptions and this is so for the following reason. Working is an event that involves *in the real world* a relation of Jose Cura to a money-making situation (a sort of commercial situation) that is absent in the singing event as described by the verb 'to sing'. That is, the verb 'work' forms the basis of event descriptions denoting events in the commercial frame; this means that in the extralinguistic world there is a participant Money and a Money transfer relation. These are conditions that are required by the verb's meaning. The singing event description does not necessarily "window" the portion of reality that involves Money-transfer, for example.

¹² 'Select' means that the set of restrictions contains in the verb meaning are satisfied by the individual or

Going back to SGC_C, the lexicalist hypothesis predicts that clauses in sentence (1), repeated below,

- (1) Juan entró a su oficina corriendo.
Juan entered to his office running
'Juan ran into his office'

cannot describe the same individual event since they are headed by two different verbs. The main clause describes an entering event and the gerund clause describes a running event and they are different events. The set of conditions involved in running are different from the ones that the event of entering needs to satisfy in order to be categorized as such. This is a purely intentional consideration; but the lexicalist hypothesis goes beyond that and asserts that the events in the real world are different. That is, the description associated with *entrar* 'enter' selects a portion of the world that is different from the portion of the world that is selected by the event description in *correr* 'run'. Entering involves an enclosed object (Goal) at the end of a Path; a moving participant (or Figure) along the Path. In contrast, running involves an Actor using her/his legs to move at a fast pace. Those are different portions of the world; they can be related, in fact there are subportions that may be shared, but they still are different events.

It is common to think that this hypothesis is just about intensions because extension is intuitively reduced to 'what can be perceived'. Since I perceive just one situation (let's say 'enter running'), then the Actor performs just one action and there is only one event. However, events are whole structures that develop in time and what I suggest is that those structures are different for those two event descriptions.

set. This individual or set is said to 'selected'.

4. THE CRITERION UNDER ATTACK

In this section I would like to defend the lexicalist criterion from some possible counterexamples. My hypothesis would be falsified if we can find cases where two event descriptions based on different verbs describe the same event. Let's call this issue the problem of event descriptions since it parallels the issue posited by nominal expressions. In the case of nominal expressions, definite description and proper names can single out the same individual (i.e. 'The author of the Aleph' and 'Jorge L. Borges'). The lexicalist criterion predicts that this is not the case for verbal predicates.

The first possible criticism on the lexicalist criterion that I discuss would also allow me to introduce some fundamental clarifications. This criticism of the lexical criterion is that the fact that one and the same event can belong to different classes, each of them categorized by different verbs, is a plain counterexample to the lexicalist criterion. Let's say that somebody died right after and as a consequence of being shot in the corner of Lark and State St. This event is reported in the news categorized as both a shooting and a killing event. This would prove that two verbs can indeed describe the same event.

My reply to this argument is as follow. The lexicalist criterion predicts that 'kill' and 'shoot' cannot form the basis of descriptions that identify the same event (in the sense of a portion of reality in the real "world") and this holds for this example too. The shooting identifies a portion of the event that does not include the person's death whereas the killing includes the death but not the shooting; for example, shooting includes a relation between an Actor and a gun and this relation is absent in the killing event. That is, let's assume a decompositional approach to the verb 'kill'; this means, that the

predicate contains a DO' relation (function). What does this relation describe? It does not identify any event in the world. It just says that a participant is dynamically involved in a certain type of event (an activity); it does not window or delimit the portion of the world denoted by shooting. The same is true for shooting; namely, the set of shooting events do not involve killing events.

If this is so obvious, why do we tend to think that both verbs identify the same event? The reason is pragmatics; that is, the presumed identity of events is not grounded in the information contained in the event descriptions but in the way we apply those descriptions to the world. We make use of metonymic relations such that if a policeman asks a witness 'what do you know about the shooting' the hearer would understand that the question is about the whole event, including the killing, nor just the shooting part.

How about 'killing' and 'murdering'? The answer is basically the same; there are relations in a murder event -such as the Actor performing an intentional action- that are not included in the killing event. However, a murdering event can be identified as a killing event because speakers and hearers make widespread use of metonymy; but this is a pragmatic dimension rather than a purely semantic property.¹³ The lexicalist criterion is a statement about descriptions and it is perfectly consistent with the fact that a single event belongs to different classes as well as with the fact that speakers use metonymy to identify one whole by one of its parts.

A different kind of possible counterexample comes from Ter Meulen (2000). She claims that the two sentences below describe identical events. This would clearly

¹³ The 'use' of metonymy in a specific might be pragmatics; metonymy itself is a semantic relation.

contradict the prediction of the lexicalist hypothesis since the two descriptions contains different verbs.

(6) John read the news this morning. His eyes were moving from left to right impatiently.

A careful examination exposes that the alleged identity can only be maintained when talking loosely about events. I argue that the two event descriptions cannot describe the same event for two main reasons. First, the two events are not in a mutual implication relation; that is, even if reading typically –but not necessarily (e.g. visually impaired people)- implies eye movement, the reverse is not true; namely, the eyes can be moved without reading. Second, the two events have different causes and effects. Hence, the right analysis describes (6) as involving a proper part relation between two events: the eyes-movement event is a proper part of the reading event. This mereological relation does not allow identity: the reading is necessarily a larger event. Hence, (4) is consistent with the lexicalist criterion since it contains two different verbs associated with different events.

The lexicalist hypothesis also makes strong predictions regarding a set of examples mentioned in Carlson 1998 (proposed originally in Lombardi 1995). Specifically, it predicts that none of the sentences below can describe the same event.

- (7)
- a. John flipped the light switch.
 - b. John illuminated the room.
 - c. John alerted the burglar.

Regarding the events in ‘a’ and ‘b’ Carlson (1998) points out that the flipping can be done with an elbow and one can say the elbow flopped the light; on the contrary, one cannot sensibly say that the elbow illuminated the room. Therefore, the two events may have different causes and, hence, they constitute different events.

On the contrary, Carlson has a different take on examples ‘b’ and ‘c’; he proposes that they describe the same event. The Actor performed just one action and this action is both the event of illuminating and the one of alerting.

Let’s analyze for a moment the effects of those events. The room was illuminated but the burglar was not. Also, the room was not alerted but only the burglar was. This means that the Patients of the events are different. Hence, the effect of the first event does not necessarily have a correlate in the second event and the reverse also holds. Further, the causes are also different since the illuminating is not a sufficient condition for alerting somebody; the sole fact of illuminating does not cause the alerting; in addition, alerting but not illuminating requires a Patient able to have mental states. Therefore, we need to conclude that these event descriptions are associated with different events.

The following pair of sentences constitutes a true counterexample for the lexicalist hypothesis.

(8) The water froze in the pond.

(9) The water crystallized in the pond.¹⁴

It seems hardly arguable here that the two descriptions can identify exactly the same event. The fact is that this counterexample is systematic; namely, there is a pattern that explains the behavior of those verbs; they belong to different ‘sublanguages’ (i.e.

¹⁴ I owe this example to Lee Franklin (p.c.).

‘jargons’). In particular, ‘freeze’ is a verb that belongs to the active lexicon of English speakers, it is a verb that is readily used to describe the type of events referred by (8) and (9). In contrast, ‘crystallize’ is a verb that belongs to the scientific jargon and, in consequence, would not be used in a situation where two friends are talking while walking in the park, unless they happen to be physicists. Since we can identify the pattern that governs this usage, those sentences do not harm the basic hypothesis of the lexicalist criterion. The two verbs belong, strictly speaking, to different lexical systems.

The same reasoning applies to verbs such as ‘saunter’, which may be given as equivalent to ‘walk’.¹⁵ These verbs do not mean exactly the same since ‘saunter’ is a manner of walking (it denotes a leisure walk (Webster Dictionary)). But even if these verbs would identify exactly the same event, it would not constitute a counterexample since ‘saunter’ is not part of the active lexicon of English speakers. We can find it in dictionaries or literary work, but it is not part of the lexical items used by speakers.¹⁶

5. CONCLUSION

The lexicalist criterion makes a strong claim about the relation between verbs and their denotata in the external world: it claims that events are ‘intentionally dependent entities’. This means that they can only be identified by their descriptions. The fundamental constituents of those descriptions are relations; each verb meaning contains a complex of relations that is somehow unique; thus, two event descriptions with different relations involve different events.

¹⁵ I owe this example to Belle Gironde (p.c.)

¹⁶ In fact, in an informal survey I have noticed that more than half of a group of Ph.D. students who were native speakers did not know or were not sure about the meaning of this verb as well as the verb ‘amble’.

The lexicalist criterion (LC) makes a strong claim about the lexicon since it predicts that the lexicon does not contain verbal items that can be used as description of the same event. Put it in this way, LC is too strong. Semantic research for the last decades has made clear that the design of languages is not only sensitive to the demands of representing the world but also to the needs of reflecting the perspective of the speaker about that world (Fillmore 1977). Pairs of verbs like ‘buy/sell’, ‘steal/rob’, ‘please/like’, and so forth describe the same event from a different perspective in the sense of focusing on different participants; they are ‘perspective sensitive verbs’ since the differential property of each member of the pair relates to the perspective in which the event is described rather than to information about the event itself. Since these verbs constitute an identifiable and restricted set of verbs in the lexicon, it does not undermine LC as a central criterion on lexical organization; ‘perspective-sensitive verbs’ constitute an exception because they differ from each other not by the intrinsic properties of the denoted events but rather by the perspective from which those events are represented.

The same is true for lexical items that differ only in the social setting in which they can be felicitously used. There is a large set of verb pairs in which the opposition is defined only by the context in which each member can be uttered. For example, in some dialects of Spanish the opposition between *tomar* ‘drink’ and *beber* ‘drink’ rests only on the distinction between formal and informal settings. This is also a restricted set of verbs and their properties can be easily determined; hence, it does not undermine LC as a general principle, which implies that the lexicon avoids items that are truth-conditionally synonymous. The LC is a sort of functional economy principle that divides up the labor for every lexical entry.

CHAPTER IV

ON EVENT RELATIONS: CIRCUMSTANCE SHARING

I claim in this chapter that two events sharing a participant in relation to the same spatio-temporal circumstance constitutes a mereological relation that I call ‘Cicumstance Sharing’ (CiS) and grammars encode CiS as a mereological relation. This is the case of the subtype SGC_{C-CIRC} of SGC_C , whose semantics involves CiS and the gerund is expressed as a complement to the main verb.

The notion of CiS and its grammatical status can be derived from a theory that represents events as hierarchical structures (semi-lattices). It becomes clear from this view that the relation in SGC_{C-CIRC} is not simply individual sharing but rather the sharing of a ‘stage’ of an individual.¹⁷

1. INTRODUCTION

The meaning of SGC encodes a semantic relation connecting the events denoted, respectively, by the main and the gerund clause, as can be seen in the subtype SGC_{C-CIRC} illustrated in the sentence below.

- (1) Tu jefe entró a la oficina rompiendo mi carta.
your boss entered to the office tearing-apart my letter
‘Your boss entered the office tearing my letter apart’

The main clause and the embedded phrase express the event descriptions $\delta(e_M)$ and $\delta(e_G)$, respectively. The semantic relation between those descriptions is not encoded in any of

¹⁷ By ‘individual’ I mean any entity in the world that can be referred to as an entity separated of any other one.

the constituents but every speaker understand that they are related in such a way that they constitute a sort of unit, a complex event or Macro-event. In support of this intuition comes the fact that these two events are performed by the same participant (i.e. *el jefe*), and take place at the same time; however, they are not related by one of the typical ‘event-building’ relations such as causality, purpose, condition, and the like; so that the breaking event is neither, for example, the consequence, the effect or the purpose of the entering event. The aim of this section is to make the relation between e_M and e_G explicit.

The Complement SGC reflects the same sort of semantic interpretation as equivalent constructions in Romance languages as can be seen below.

(2) French (Halmoy 1982:290; Haspelmath 1995:66)

- a. ... dit-il en se levant
said-he GER self raise:GER
‘... he said standing up’

Italian

- b. Il contadino arrivó al suo paese piangendo.
the farmer arrived to-the his land crying
‘The farmer arrived to his town crying’

The examples above contain two verb forms expressing events that are performed by the same participant, at the same time, and there is no semantic relation of type ‘cause’, ‘purpose’, ‘consequence’, and the like between the two events.

Languages with serial verb constructions may also convey the same kind of relations between events that is expressed expressed in (1) through SGC_C with serial verbs.

(3) Khalke Mongolian (Bisang 1995:163)

a. temee bilčiž jav-na
camel graze-CONV walk-TAM
'A camel walks grazing'

Barai (Foley and Olson 1985:)

b. fu fase isema fi isoe
he sit letter wrongly write
'He wrongly sat writing a letter'

Japanese (Bisang 1995:161)

c. Uta o utat-te iki-mashi-ta
song ACC sing-CONV go-HON-PAT
'He went along singing'

This brief comparison shows that the characterization of the semantics of SGC_C in (1) may also be crosslinguistically relevant in the sense that it could apply to equivalent structures in Romance and serial verb constructions in a variety of languages. More importantly, it also suggests that grammars assign a special status to the sort of semantics we are analyzing. The general pattern of the syntax-semantics interface outlined in chapter II –i.e. Core Syntax is associated with constituents that express the meaning of the main predicate or are in a mereological relation with the main event- predicts that the meaning associated with the syntax of SGC_C and serial verb constructions consists in the establishment of mereological relations between the events described by the two verbal expressions. The goal of this chapter and the next is to present an analysis of the semantic properties of SGC_C that can motivate its syntactic expression.

2. THE SEMANTIC PROPERTIES OF SGC_{C-CIRC}

I will start the semantic analysis of SGC_C by analyzing first the temporal interpretation of (1). It presents two events taking place at the same time but it does not

entail that they need to be simultaneous; the gerund event e_G could have started before the main event e_M . That is, the time interval t_G of e_G can have an initial part that precedes the interval t_M of e_M ; Juan could have been tearing the letter apart before he started to enter his office. In addition, t_G could extend longer than t_M ; thus, the final part of t_M can precede the final part of t_G . Thus, t_G can be larger than t_M at both ends and, thus, larger in general.

Can t_M be likewise larger than t_G ? No. In fact, the interpretation of (1) asserts that e_G took place at every moment in which e_M was taking place –of course, minus pragmatic gaps. Thus, t_G extends over the entire interval t_M , i.e. t_M is included in t_G ($t_M \subseteq t_G$). For the sake of consistency; I will represent the relation of inclusion following the system defined in Krifka 1998 since I will be using it throughout this investigation to represent temporal and event mereological relations. Inclusion among intervals can be expressed as a mereological relation between two intervals, as in (4).

- (4) a. $t_M \leq_C t_G$
 b. $\forall x, y \in U_C [x \leq_C y \leftrightarrow x \oplus y = y]$

This says that t_M is a non-necessarily proper part of t_G . The relation of proper part is defined in (4b); if an interval x is a part of y , the “addition” of x and y results in y .

There is a subset of instances of SGC_{C-CIRC} for which inclusion is too strong; namely when the main verb is causative, as (5) illustrates.

- (5) Su compañero le entregó el botín sonriendo.
 his mate him-DAT gave the loot smiling
 ‘His mate gave him the loot smiling’

Causative verbs denote an event that contains two sub-eventualities and a causal relation which assigns different roles to them. One is a (generic) causing eventuality and the other

a caused change of state/location. The subeventualities are ordered in a sequence of contiguous events and, hence, contiguous intervals. In the example above, the causing eventuality e_{M1} is whatever the mate did that caused e_{M2} (i.e. the money to be at the receiver). The interval t_G of the smiling event e_G includes the subpart t_{M1} associated with e_{M1} ; in contrast, (5) does not specify the relation between t_G and t_{M2} , the subinterval associated with e_{M2} . Therefore, the temporal relation strictly required by SGC_C is that of overlap; namely, there is a non-necessarily proper part of t_G that is also a non-necessarily proper part of t_M as stated below.¹⁸

(6) $t_M \otimes t_G$

The temporal constraint could be further specified by a precedence relation in the sense that the initial part of t_G must not be preceded by the initial part of t_M .

The need for separate structures for events and times in modeling linguistic meaning is still an ongoing discussion among semanticists. The semantics of SGC_{C-CIRC} seems to require separate structures since overlapping intervals do not necessarily convey overlapping events. In sentence (1), for example, the breaking event does not contain a subevent that is necessarily also a subevent of the entering event. For example, the breaking could have unfolded quickly but this does not entail that the entering was also quick. There is no ground to assume an event overlapping relation for (1) in spite of overlapping time intervals.

This mismatch between times and events is expected in a model such as the one presented in Krifka 1998 which consists of two different structures for events and times

¹⁸ The relation of overlapping is defined in Krifka 1998 as follow,

(i) $\forall x, y \in U_C [x \otimes_C y \leftrightarrow \exists z \in U_C [z \leq_C x \wedge z \leq_C y]]$

Two overlapping intervals satisfy the condition of sharing a non-necessarily proper subpart.

plus an homomorphic function from events to times. That ensures that mereological relations among events necessarily convey mereological relation among times (but the reverse does not hold).

There are other relations than temporal overlapping between the event descriptions $\delta(e_G)$ and $\delta(e_M)$. As shown in the previous chapter, SGC_C is an obligatory control construction and this is the structural correlate of a semantic constraint that requires a participant of e_M and a participant in e_G to be identical. In the case of (1) *el jefe* denotes an individual that participates in both the event of entering and the event of tearing the letter apart.

Interval sharing and participant sharing are not sufficient conditions for an event relation. There is no relation in entering –i.e. movement, state of being located- that is also a necessary relation in the event of tearing. The two events share time and a participant but there is no further semantic internal or external relation –i.e. consequence, purpose, etc.- connecting the two events.

I argue that there is yet a third constraint associated with SGC_{C-CIRC} which may suggest that the connection is stronger than what I just said. The events e_G and e_M not only share a temporal interval and a participant but there is also a property of the (sub)events that is common to both events.

A piece of evidence indicating the presence of another constraint beyond mere co-occurrence of the two events and shared participant is the fact that individual state predicates are ruled out as main verbs in SGC_{C-CIRC} .

- (7) #Mi tío odia el Otoño barriendo las hojas.
 Mi uncle hates the Fall raking the leaves
 ‘Mi uncle hates Fall while he is raking the leaves’

I propose that the factor banning (7) is a constraint that requires main predicates to be ‘dynamic’.

Stage-level predicates –which are ‘dynamic’ in the sense of Bach 1986- are acceptable as shown in (8).¹⁹

- (8) El paciente parecía triste contando su historia.
 the patient seemed-IMP sad telling her/his story
 ‘The patient looked sad while telling his story’

The translation of (8) I give is the one that corresponds to SGC_{C-CIRC} . It can be argued that there is an interpretation of (8) in which the relation of ‘consequence’ connects the two events. In contrast, I argue that ‘consequence’ would not be an interpretation encoded in the construction, it is rather an implicature that the addressee may draw that it is not necessarily stated nor entailed by the sentence.

Not every stage level state predicate seems to be felicitous in SGC_{C-CIRC} ; in fact only a few of them are. For example, sentence (9) contains a stage state predicate but it is unlikely to interpret it as two events that are merely in a co-occurrence relation; in contrast, a relation of consequence between the two events would make the sentence acceptable.

- (9) ?# El paciente estaba aburrido mirando televisión.
 the patient was-IMP bored watching television
 ‘The patient was bored while watching TV’

¹⁹ The predicate *parecer* (which in this case might be better translated as ‘give the impression’) is ‘dynamic’ because it is a ‘stage’ level predicate; namely, it denotes a property of an individual in relation to a bounded period of time.

It looks like if the only possible expression of the predicates in (9) would have the ‘consequence’ interpretation and the intonational stress should fall in the main verb (or VP) rather than in the gerund phrase. The consequence reading of that sentence would be transparent if the gerund phrase is preposed as in (10).

- (10) Mirando televisión, el paciente estaba aburrido.
 watching TV, the patient was-IMP bored
 ‘Watching TV, the patient was bored’

The fact that sentence (10) belongs to a different subtype is made clear by the ungrammaticality in (11), which derives from the fact that SGC_{C-CIRC} disallow the preposing of GP.

- (11) *Silbando un tango, tu jefe entró a la oficina.
 whistling a tango, your boss entered to the office
 ‘Your boss entered the office while whistling a tango’ (intended)

Examples (9) to (11) present pieces of evidence leading to the conclusion that SGC_{C-CIRC} does not accept individual stage level predicates expressed by the main clause.

Individual state predicates cannot be part of SGC_{C-CIRC} as part of the gerund phrase either. However, in this case the interpretation can be coerced such that the individual level predicate becomes a stage-level one describing a temporary position. SGC_{C-CIRC} coerces individual predicates into stage-level ones and only under this reinterpretation they are acceptable.

- (12) La niña vino de Florida sabiendo Español.
 the girl came from Florida knowing Spanish
 ‘The girl came from Florida knowing Spanish’

The state described by the gerund phrase in (12) is not a permanent state; namely, it is presupposed that the girl learned Spanish at some point *while in Florida* for (12) to be true. If the girl is a native speaker of Spanish, the sentence would not be felicitous. A

dynamic predicate involves non-homogeneous eventualities; if any change is entailed – either asserted or presupposed as in this case-, then the predicate is dynamic.

There are dynamic eventualities, however, that produce semantically odd sentences as is shown in example (13), which would suggest that not only dynamicity but perhaps duration is required of the events involved in SGC_C .

- (13) # El policía se cayó fumando.
the policeman REF-fell smoking
'The policeman fell while smoking' (intended reading)

Caerse is an intransitive verb that entails a change of position of its subject (i.e. ergative-unaccusative verb); it also entails that the change is non-intentional (otherwise, speakers would use *tirarse* 'jump-out'), which is vacuously satisfied by any non-animate object.

The anomaly in (13) cannot solely come from the mere combination of the two predicates since they can be indeed connected in an adverbial temporal construction (ATC) as shown in the ATC_{WHILE} in (14).

- (14) El policía se cayó mientras fumaba.
the policeman REF-fell while smoked-IMP
'The policeman was smoking as he fell'

Further, the same main verb can be felicitously used in another subtype of SGC , namely, $SGC_{C-MEANS}$.

- (15) El policía se cayó persiguiendo al sospechoso.
The policeman REF-tripped-over following to-the suspect
'The policeman fell (while) following the suspected criminal'

In this case, the gerund event e_G is a motion verb that contains a Path; the final part of this Path is the Place where the falling event e_M takes place.

One might think the lack of 'activity' (that the shared participant –the subject controller- is an Undergoer) causes the violation of the constraint on dynamic predicates.

However, the non-reflexive correlate of *caerse* is apt as a main verb for SGC_{C-CIRC} as shown in (16).

- (16) El gato cayó del segundo piso aullando.
the cat fell from-the second floor howling
'The cat fell from the second floor howling'

The contrast between *caerse* and *caer* is motivated by the presence/absence of a Path; the first predicate is an inchoative verb that focuses on the 'punctual' interval associated with the change of position. In contrast, *caer* includes the entire Path that is followed by the subject/Theme from its initial to its final position. This contrast shows that the property that rules out (14) is 'duration'; SGC_{C-CIRC} requires the events descriptions to be durative and, hence, be associated with intervals rather than instants.

Other predicates denoting instantaneous changes of state like *caerse* regarding duration such as *pestañar* 'blink', *estornudar* 'sneeze', *bostezar* 'yawn', cannot be main verbs in SGC_{C-CIRC} either.

- (17) El estudiante me guiñó un ojo saliendo de la sala.
the student me-DAT winked an eye leaving from the room
'The student winked at me while leaving the room'

The gerund phrase in (17) is interpreted as the circumstantial spatio-temporal 'location' of the main event. This is an instance of SGC_A as shown by the fact that the stress falls on the main predicate and that the preposing of GP illustrated in (18) is acceptable and conveys the same semantics as (17).

- (18) Saliendo de la sala, el estudiante me guiñó un ojo.
leaving from the room, the student me-DAT blink one eye
'Leaving from the room, the student winked at me'

The constraints on dynamic and durative events hold of gerund events as well as of main events. It has been shown that SGC_{C-CIRC} does not allow the GP to express

individual state predicates; they are coerced (via the appropriate semantic operator) into stage predicates. The gerund event also needs to be durative as the anomaly in (19) shows, which is due to the presence of the inchoative predicate *caerse* ‘fall’.

- (19) #Juan caminó por el parque cayéndose en la vereda.
 Juan walked by the park falling-REF in the sidewalk
 ‘Juan fell in the sidewalk while walking in the park’ (intended)

In contrast, these two predicates can be combined via SGC_A , showing that the constraints only pertain to SGC_{C-CIRC} .

- (20) Juan caminó por el parque, cayéndose en la vereda.
 Juan walked by the park falling-REF in the sidewalk
 ‘Juan walked in the park, falling down in the sidewalk’

Example (21) shows that the GP allows Undergoer subjects only if they take part in a dynamic eventuality.

- (21) Juan caminó por el parque bostezando.
 Juan walked through the park yawning
 ‘Juan walked along the park yawning’

The verb *bostezar* ‘yawn’ contains a subject that undergoes an uncontrolled change of (bodily) state. However, it is involved in a dynamic event since it involves change and this makes the SGC_C construct felicitous.

A possible challenge for the constraint that the main and the gerund event must denote dynamic eventualities might come from passive sentences such as (22).

- (22) La víctima fue asesinada caminando por el parque.
 the victim was killed walking by the park
 ‘The victim was killed while walking in the park’

The predicate *atacar* ‘attack’ is dynamic, but it can be argued that in this case since this is a passive sentence the subject *la víctima* is only involved in a state, a non-dynamic eventuality for it is affected by the causing event. Only this causing event is dynamic, not

the resulting state. I argue that this resulting state is dynamic because it involves a change of state. Therefore, passive sentences do not violate the constraint requiring dynamic predicates stated above.

3. ON CIRCUMSTANCE SHARING

I have presented thus far the constraints on SGC_{C-CIRC} as a conjunction of properties: time overlapping, participant sharing and dynamic and durative events. In this section I argue that this is not an arbitrary convergence of properties; rather, there are semantic reasons explaining why they come together in SGC_{C-CIRC} .

I propose that the semantics of SGC_{C-CIRC} can be described as the satisfaction by the main clause and the gerund phrase of a single Circumstance Sharing (CiS) constraint. This constraint states that the two event descriptions $\delta(e_M)$ and $\delta(e_G)$ not only share individual participants; they also share that relation among them; these event descriptions share a participant in relation to a specific time interval.

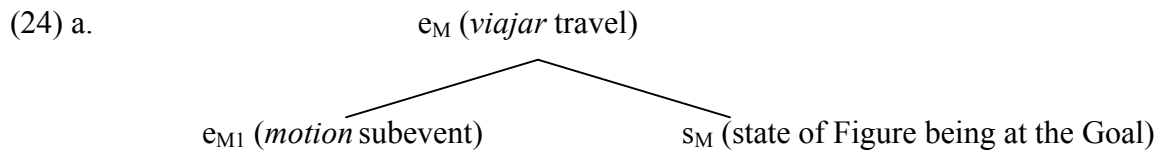
There are two essential aspects of CiS. First, CiS implies that the events share a participant under the same *circumstances*; which I define as the spatio-temporal region where a participant can be involved in a causal chain. That is, the schematic region where the participant can act upon other individuals and be acted upon. The second implication of CiS is that the events share a ‘stage’ of the shared individual in the sense of Kraetzer 1995. The events assigned a property to this participant, namely that of being involved dynamically in these eventualities (dynamicity was shown to be one of the requirements of SGC_{C-CIRC}).

In brief, I claim that the meaning of SGC_{C-CIRC} cannot be simply reduced to a relation between two events that share a participant and a time interval. On the contrary, the construction relates two events that share a stage of a participant under the same circumstances. More generally, the two events share participants in relation to the event structure in which these participants are inserted. The type of sharing required in CiS is encoded by grammars as an event relation (as opposed to a merely temporal relation between events) and, as such, motivates the underlying syntax of the construction.²⁰

The status of CiS as a constraint on event (internal) relations is ultimately a consequence of the general structure of events. In the view adopted throughout this thesis, an event is a hierarchy of parts –i.e. a semilattice. Every branching of this hierarchy represents the partition of a node into its parts. Thus, a representation of the verb *viajar* ‘travel’, as used in the SGC_{C-CIRC} sentence below, can be seen in its diagram in (24).

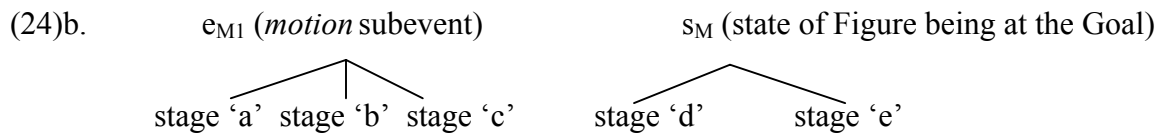
- (23) Juan viajó a Roma leyendo el Aleph.
 Juan traveled to Rome reading the Aleph
 ‘Juan read the Aleph while travelling to Rome’

The travel event has two subeventualities as immediate parts as shown in (24a).

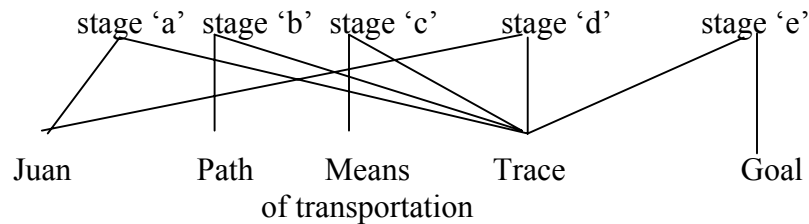


²⁰ The notion of *circumstance* is also relevant in lexicalization. Predicates that contain subevents connect them with stronger relations than temporal ones such as ‘cause’, ‘consequence’ or ‘purpose’. Interestingly enough, verbs like ‘accompany’, ‘follow’ or ‘border’ seems to contradict the pattern (Leonard Talmy, p.c.). However, I still would claim that those (sub)eventualities share the same circumstance (the same spatio-temporal region) rather than merely co-occurring events regardless of the space where they take place.

Diagram (24b) represents the immediate parts of the subevents that compose the travel event. Every immediate part of the subevents is a ‘stage’ or ‘circumstance’ of a participant; namely, a pair of an individual and a spatio-temporal trace in relation to the overall structure of an event (i.e. the travel event in this example).



In (24c) we represent the structure of every stage.



The upper-most node corresponds to the traveling event; the second level of the hierarchy in (24a) corresponds to the subevents of e_M . It is important to stress the difference between ‘arbitrary’ subevents and the subevents in this hierarchy. Any ‘slice’ of e_M constitutes an ‘arbitrary’ subevent of e_M . In contrast, the sense in which e_{MI} and s_M are subeventualities of e_M is different; they are qualified subevents, specific ‘slices’ of e_M selected by e_M as uniquely definable parts that are semantically related in the structure that defines e_M . The semantic primitives used in decompositional analyses describe these qualified subeventualities of an event (cf. Dowty 1979; Van Valin and LaPolla 1997; Talmy 2000). I will assume that these ‘qualified’ subevents of e_M are intensionally defined by the presence of a relation among event participants of the type traditionally described in terms of semantic primitives such as, for example, motion (MOVE, GO), states (BE-AT), change of state (BECOME); and the like.

The following level in the hierarchy contains ‘stages’; namely, relations between participants and time (sub)intervals. Finally, individual participants appear at the bottom level of the hierarchy. The distinction among levels is essential. Strictly speaking, only the nodes immediately dominated by e_M are parts of it; the third level and the components are not immediate parts of e_M . They are still parts of e_M in some weaker sense but only because they are parts of a structure that is an immediate part of e_M .

The semantics of SGC_{C-CIRC} targets the third level of an event structure. It requires the sharing of a non-immediate part. Spanish grammar allows an event that shares an immediate part with the main event to be expressed as a syntactic argument. SGC_{C-CIRC} suggests that lower levels of this event hierarchy can be targeted by syntactic constructions; the level of relations among individual participants. The special syntactic status of GPs in SGC_{C-CIRC} is, then, justified since it requires the expression of relations between event parts involving ‘relations’ rather than individual participants. That is, it is not the case that e_M and e_G are performed by the same individual entity that, thus, is shared by the two events but also e_M and e_G share this entity in relation to the same time interval: e_G and e_M share a relation in addition to individual participants.

The notion of ‘part’ will be reserved for ‘immediate parts’ as exemplified by e_{M1} and s_M in the figure (24a). Thus, these parts constitute subevents of the primary event associated with the verb. In this sense, schema (24a) presupposes a clear distinction between a ‘qualified’ subevent of e_M and any subevent that is an arbitrary ‘slice’ of e_M . That is, an arbitrary time subinterval of t_M is associated with an arbitrary subpart of e_M , namely, the subpart that holds at the selected arbitrary subinterval of t_M . In contrast, the second level of (24a) assumes that there are ‘qualified’ subevents of e_M in the sense that

rather than arbitrary they are semantically determined and selected by the meaning of the verb.

Another relevant distinction made by (24) is that the parts of a part are not immediate parts of the upper-most node, hence, they will be called components. Components of an event will not be called parts of 'e'; although, a pure formal definition of part would consider them parts. A complementary interpretation of the notion of 'immediate part' is that of 'functional part', which I interpret as any part that has an identifiable function determined by the nodes that immediately dominate it. In this sense, only 'qualified' subevents of e_M are functional parts of it in the sense that there is a defined semantic relation that relates those subevents and determines the constitution of the larger structure (i.e. the whole event or upper-most node).

The same reasoning about immediate parts and arbitrary parts applies to any domain in which Part-whole relations can be relevant. For example, only indirectly can we say that my thumb is part of my body. The anatomist would immediately reply that a thumb functions in a hand, which in turn functions in an arm. From a pure physical consideration, the finger is a proper part of my body; however, this description does not take into consideration that my body is itself a 'structure' that has different levels of organization which need to be considered. This is what the concept of 'immediate part' does for us.

Notice that the fact that immediate parts have a special status in relation to other kinds of parts cannot be derived from a more general constraint requiring parts to be of the same ontological sort than their dominating node. The parts of a house are not

themselves houses nor the parts of a sentence are necessarily sentences (nor the parts of a phrase are necessarily phrases).

4. SGC_C AND DIRECT OBJECT CONTROL

SGC_C is an obligatory but non-fixed control construction. The subject of the embedded clause is necessarily controlled but the controller may be either the subject (Actor) or the direct object (Undergoer) of the main verb.

- (25) La niña trajo la toalla chorreando agua.
The girl brought the towel dripping water
'The little girl brought the towel dripping wet'

The reference of the subject of the gerundial phrase in sentence (25) might be determined either by the Actor or the Undergoer of the main clause; context would make the second choice preferable here since it is rather typical for towels to drip water. So far, our discussion of SGC_{C-CIRC} has been limited to Subject-Actor control and the question that immediately arises from sentence (25) is if it constitutes an instance of SGC_{C-CIRC}. I will propose, with some precaution, that SGC_C with direct object controller constitutes a constructional subtype that is different from SGC_{C-CIRC} and that I call SGC_{C-O}.²¹

SGC_{C-O} is unique in many ways. First of all, it is lexically restricted so that it only involves a few verbs in the main clause. For example, creation or destruction verbs are not possible (e.g. *construir* 'build' or *romper* 'break'); in general, change of state verbs are not felicitous nor are activity verbs as shown below.

²¹ Descriptive grammars have opposed the predicative and the adverbial reading of the gerund form. More recently, Fernandez Lagunilla 1999 has stressed that in fact there is evidence to support both positions. This thesis takes the same position in the sense that it maintains that SGC_C stresses the predicative aspects of the gerund whereas in SGC_A the adverbial properties of the gerund are more relevant.

- (26) #La abuela cuidaba al niño escribiendo una carta.²²
 the grandmother took.care-IMP to.the child writing a letter
 ‘The child was writing a letter while grandma was taking care of him’ (intended)

The small set of verbs that can take part in SGC_{C-PRED} are (i) caused-directed motion verbs (such as *traer* ‘bring’ in the example above, but also *llevar* ‘take-to’; *subir* ‘lift’; *poner* ‘put’; *enviar* ‘send’), and (ii) perception verbs and ‘find’ type verbs, which are illustrated in (27) and (28) below.

- (27) La profesora vió a la niña comiendo el chocolate.
 the professor-FEM saw to the girl eating the chocolate
 ‘The professor saw the girl eating the chocolate’
- (28) ‘...entonces me pilló leyendo a Baroja...’
then me-DAT caught reading to Baroja
 ‘...then he caught me reading Baroja...’ (Oral, Madrid, *Hablando se entiende la gente* Tele 5 (RAE))

These last two examples have a different structural behavior than the typical transitive verb in SGC_{C-CIRC} . The sentences below illustrate that with both types of verbs the construction allows extraction out of the GP.

- (29) ¿Qué la vió comiendo?
 what her-ACC saw eating
 ‘What did s/he saw her eating?’
- (30) ¿Qué lo encontraron leyendo?
 What him-ACC found-3PL reading
 ‘What did they found him reading?’

As we saw in Chapter II, the extraction of NP from within the GP in SGC_{C-CIRC} is restricted to (some) intransitive verbs; if examples (29) and (30) were to be considered instances of SGC_{C-CIRC} , they would be therefore rather exceptional.²³

²² A different structural analysis of the sentence makes it acceptable by having the gerund as a nominal modifier inside the NP. This structure is not an instance of SGC .

²³ I have suggested that perception verbs take an event as argument, which would then be expressed by an infinitive or a gerund form. Borgonovo 1997 argues that gerunds in Spanish (contrary to its English morphological cousins) are not used to express syntactic arguments. Thus, these gerunds are treated as

Direct object control in SGC_C characterizes a new constructional subtype, SGC_{C-O} , different from SGC_{C-CIRC} . Does SGC_{C-O} respects the constraints on dynamic eventualities and duration that bear on SGC_{C-CIRC} ? The first subclass of SGC_{C-O} satisfies both constraints; the bringing event in (25) has the shared participant involved in a dynamic and durative event since it involves translocational motion. In contrast, the controller of perception and ‘find’ verbs is not affected by any sort of change and, hence, it is not part of a dynamic situation; we have to conclude that for these verbs the constraints do not hold and, hence, we have to represent two subtypes of SGC_{C-O} for ‘Motion’ verbs and other for ‘find’ and ‘perception’ verbs.

The semantic distinctions between SGC_{C-CIRC} and SGC_{C-O} also affect their temporal interpretations. The difference is that SGC_{C-O} requires overlapping with the final part of t_M whereas in SGC_{C-CIRC} the overlapping is only required of the initial part of t_M .

In (25) *traer* ‘bring’ is a causative verb and, hence, its semantics contains two basic events, i.e. a causing eventuality and a change of state. Hence, we can distinguish two subintervals, the interval that corresponds to the causing event (i.e. t_{M1} of e_{M1}) and the interval that corresponds to the change of state (i.e. t_{M2} of e_{M2}), which are both properly included in t_M . The interpretation of sentence (25) requires an overlapping relation between t_{M2} and t_G ; that is, the assertion is that the towel was dripping (at least) since the time in which it was moved and until it reached its final destination. The meaning of the construction does not require the dripping to be going on while the

exceptional either in allowing extraction or in expressing a subcategorized argument. The strong lexical restriction limiting the set of possible main verbs in these examples would suggest that -contra Borgonovo 1997- the embedded clauses express arguments of the main predicates.

causing eventuality was taking place; hence, this is not part of the assertion. The initial part of the bringing event has the Actor getting in contact with the object that is going to be moved; no dripping is required to have occurred during that subinterval.

(31) $t_G \otimes t_{M2}$

In contrast, example (5) shows that SGC_{C-CIRC} only requires overlapping with the initial part of t_M ; namely, the interval that corresponds to the subpart of e_M that contains the causing eventuality, which is the eventuality that involves the shared participant. The assertion does not necessarily specify that the smiling was still going on once the Actor ended its involvement in the event; namely, there is no requirement of an overlap between t_G and t_{M2} , the interval that corresponds to the final state of the object that changed possession.

In conclusion, there are formal as well as semantic properties that justify treating SGC_C sentence which involve direct object control as belonging to a different constructional subtype of SGC_C , namely SGC_{C-O} .

5. AN ASYMMETRY IN THE SEMANTICS-PRAGMATICS INTERFACE

A final dimension of the interpretation of SGC_{C-CIRC} remains to be addressed. It is illustrated by the contrast between (32) and (33).

(32) Manejó a casa fumando un cigarrillo.
Drove to house smoking a cigarette
'S/he drove home smoking a cigarette'

(33) Fumó un cigarillo manejando a casa.
Smoked a cigarette driving to house
'S/he smoked a cigarette driving home'

The semantics of these two sentences seems at first to be equivalent; however, their interpretations differ. Sentence (32) cannot be an answer to the question *¿Cuándo manejó?* ‘When did he drive?’ whereas (33) is a felicitous answer to *¿Cuándo fumó un cigarillo?* ‘When did he smoke a cigarette?’ Further, we can associate with (32) the Manner paraphrase *manejar fumando es una manera de manejar* ‘driving smoking is a way of driving’ whereas the same paraphrase of (33) is not felicitous, namely *fumar manejando es una manera de fumar* ‘smoking driving is a way of smoking’ is odd. Intuitively, the GP in (32) expresses an event description that contains more information about the circumstance in which the main event (the smoking) was performed. In contrast, the GP in (33) is the circumstance of e_M ; that is, the GP is used as a reference point that anchors spatio-temporally the main event e_M .

This asymmetry in the relation between e_M and e_G cannot be predicted from CiS, which is itself a symmetric relation; namely, CiS assigns the same role to both events and, hence, we would expect the relation to be commutative; examples (32) and (33) show that this is not the case.

The fact that gerunds and finite verbs have different aspectual properties cannot by itself motivate the difference in interpretation between (32) and (33). Gerunds are intrinsically modified by an imperfective operator that changes telic eventualities into atelic ones (cf. Paris 1999 for Spanish gerunds in SGC; for Imperfectivity see interalia Dowty 1981, Portner 1998, Koenig and Muansuwan 2000). This fact does not seem to be relevant here since the GPs in (32) and (33) are both atelic but still their relation to the main event differs; hence, telicity cannot explain the asymmetry between the two events.

In turn, the syntax of SGC_C is asymmetric in many ways. The gerund clause is optional and embedded into the main clause; the main clause is finite whereas the gerund is not; finally, the main predicate can be modified by negation or aspectual operators whereas the gerund cannot. These asymmetries, however, cannot explain either the different interpretations of (32) and (33); if the interpretations assign symmetric roles to both clauses, this symmetric semantics should be insensitive to a syntactic asymmetry.

I propose that the asymmetry comes from the interaction between the semantics of the main and gerund predicates and the sentence's information structure. SGC_C is associated with a default information structure that corresponds to its typical intonation pattern (in general, the intonation pattern in which the main stress comes after the main VP). In contrast to ATC (Adverbial Temporal Construction), the main clause in SGC_C carries the presupposed material whereas the GP is the FOCUS. Focus sensitive operators such as negation or event quantifiers offer pieces of evidence supporting my description of SGC_C 's information structure. For example, the universal quantifier *siempre* 'always' takes the presupposition as restriction and the FOCUS as scope. That is, the universal quantifier has universal force over the restriction but not over the scope.

- (34) Siempre maneja a casa fumando.
 always drives to house smoking
 'S/he always drives home smoking'

Sentence (34) says that every driving event involves smoking but there may be smoking events that do not involve driving.

Assuming the information structure for SGC_{C-CIRC} given above, the contrast between (32) and (33) can be captured in a more precise way; namely, in an CiS relation between a directed motion event and an non-motion event, only the directed motion event

can serve as the background for the non-motion event, which in turns needs to be FOCUS. Otherwise, the sentence is not an instance of SGC_{C-CIRC} anymore but it represents an SGC_A structure, as shown by the contrast between the sentences (35) and (36).

(35) #Fumando un cigarillo, Juan manejó a su casa.
 smoking a cigarette, Juan drove to his house
 ‘Juan drove home smoking a cigarette’ (intended)

(36) Manejando a su casa, Juan fumó un cigarillo.
 driving to his house, Juan smoked a cigarette
 ‘Driving home, Juan smoked a cigarette’

SGC_{C-CIRC} in (35) does not admit the preposing of the GP whereas (36) admits it. SGC_{C-CIRC} does not allow pause between the clauses; that is why (35) is not felicitous since (32) is an instance of SGC_{C-CIRC} . In contrast, the fact that (36) is acceptable shows that (33) does not instantiate SGC_{C-CIRC} but rather SGC_A . The focus structure of SGC_A is similar also to the one that corresponds to ATC; namely, the main clause is the FOCUS whereas the embedded clause contains the content that is presupposed. The only possible intonation pattern for (36) supports this analysis since the main clause predicate receives primary stress, which is consistent with the claim that it functions as FOCUS.

My claim, then, is that directed motion events must be presupposition under an CiS relation. Further, the pattern holds even if the directed motion event is not under CiS; they still need to function as presupposition in SGC_A (i.e. (36) and (33)). The overall generalization seems to be that directed motion events must be presuppositions of non-directed motion events or, in other words, directed motion events cannot be the FOCUS of a non-directed motion verb.

Other verb classes are not sensitive to the asymmetric information structure of the construction. In the examples (37) and (38), an accomplishment verb and a motion verb seems to be switch roles without altering the reading of the sentence or the construction.

- (37) Juan leyó el diario caminando
 Juan read the newspaper walking
 ‘Juan read the newspaper walking’
- (38) Juan caminó leyendo el diario.
 Juan walked reading the newspaper
 ‘Juan walked reading the newspaper’

None of the sentences above can be an answer to a ‘when’ question (i.e. *¿Cuándo leyó el diario?* When did he read the newspaper?) and both accept the manner paraphrase; namely, *leer caminando es una manera de leer* ‘reading while walking is a way of reading’ or *caminar leyendo es una manera de caminar* ‘walking while reading is a way of walking’ are both acceptable. In sum, both sentences are instances of SGC_{C-CIRC} .

Let me just summarize the findings of the preceding paragraph. First, in a relation between directed motion events and any other event class, the former are predicted to be presupposition in SGC_{C-CIRC} . Second, if CiS involves a relation between an accomplishment event and a non-accomplishment (non-motion) event, the former are predicted to be the presupposed material.

This asymmetry in information structure –that will be more thoroughly studied in chapter VIII- is not exclusive of SGC_{C-CIRC} ; it is intrinsic to SGC_C and, in fact, it even has a stronger effect on $SGC_{C-MEANS}$, a constructional subtype of SGC_C defined by the presence of an overlapping relation between events that will be described in the next chapter. Some examples of this subtype cannot reverse the main and gerund predicates at all (as I show in chapter VIII). Furthermore, it was shown above that SGC_A is also

sensitive to the asymmetry and, interestingly enough, the same pattern in the semantics-pragmatics interface holds for ATC sentences.

- (39) Juan fuma cuando maneja a su casa.
Juan smokes when drives to his house
'Juan smokes when he drives home'
- (40) #Juan maneja a su casa cuando fuma.
Juan drives to his home when smokes
'Juan drives home when he smokes' (intended meaning)

In ATC_{WHEN} the FOCUS is the main clause and the presupposed information is expressed by the adverbial clause. Sentence (40) shows that directed motion events must also be presupposed in ATC. There is, therefore, a cross-constructional pattern that links motion verbs to the presupposition when they are related through SGC or ATC constructions to non-directed motion events. In addition, this further supports the thesis that the explanation of the asymmetry between the predicates resides in the principles interfacing semantics and information structure rather than in those interfacing the semantics and syntax since directed motion events are expressed in the embedded clause in ATC and the main clause in SGC_{C-CIRC}. The property that remains constant across these two construction types is the status of motion verbs as presupposition.

So far, the underlying motivation for this semantics-information structure pattern is still a question. The phenomenon resembles the figure-ground effects in symmetric predicates thoroughly investigated in Talmy (2000). Thus, for example, the predicate 'be next to' is semantically symmetric.

The commutation of the subject and object of 'to' is not always possible. For example, one can say 'the bike is next to the church' but 'the church is next to the bike' is not felicitous (Talmy 2000) even if truth-conditionally equivalent. The question is what

are the parameters equivalent to size and mobility in the case of events. Chapter VIII will attempt to answer this question.

6. EXPANDING THE DATA

In this section I present a number of examples of SGC_{C-CIRC} and analyze them in terms of the categories and properties with which I have characterized this constructional subtype. For example, sentence (40) is a case of SGC_{C-CIRC} , the intonational stress falls necessarily on the gerund clause.

(40) Oral, Television, Tatuaje, TVE 4/24/85 (RAE)

‘...empezó a interrogarme todas las noches poniendo, delante de él, su pistola cuarenta y cinco ...’
started to interrogate-me every the nights putting, in front of him, his pistol forty and five
‘he started to interrogate me every night while putting a forty five pistol in front of him’

A pause between the clauses would make this SGC_{C-CIRC} sentence unacceptable (i.e. *...interrogarme, poniendo delante de él su pistola...). The continuation of the gerund clause may describe an entirely different event that follows temporally the event in the main clause, turning the structure in an instance of SGC_A . Another way to change the reading would be to prepose the gerund clause; in this way the events rather than having time intervals that overlap –as required by CiS- would be temporally ordered in a sequence.

It is not uncommon to find examples that are somehow in between two subtypes of SGC; in fact, this seems to be a rather common pattern for this construction. This is the case with the following sentence.

(41) La mujer en la historia, ‘Women in History’ Vega Eulalia de, 1992 (RAE)

‘las mujeres pudieron acceder a trabajos mas cualificados compitiendo con los hombres’

the women could access to jobs more qualified competing with the men
'Women were able to get better qualified jobs competing with men...'

One of the interpretations of (41) is that women were able to apply and get jobs that were also requested by men. There is no relation of 'consequence' between *acceder* 'to have access to' and *competir* 'compete' since the two events they denote are not in a sequence, but happen simultaneously. The difficult point here is to decide if these events are in the same causal chain or not; namely, the translation could have been also 'women were able to get ... jobs by competing with men'. In this case, it is the competing event what got women into the jobs whereas in my previous translation the competing event was incidental to their getting jobs. This translation makes (41) an instance of SGC_{C-CIRC} whereas the same-causal-chain translation makes it an instance of the subtype $SGC_{C-MEANS}$ analyzed in the next chapter.

The following sentence presents also a similar problem.

- (43) '...estamos seguros que nos vamos a divertir leyendo su novela ...'
are-we sure that us go-AUX-we to have.fun reading his novel
'We are sure that we are going to enjoy ourselves reading his novel' (Oral, RAE)

There is no question that this sentence is an instance of SGC_C , the problem is deciding if it belongs to SGC_{C-CIRC} or to the subtype $SGCC-MEANS$ that will be analyzed in the next chapter. Roughly speaking, the central difference between these two subtypes is that SGC_{C-CIRC} requires the satisfaction of CiS whereas $SGCC-MEANS$ demands the relation to be stronger than CiS since it involves the events to be in the same 'causal chain' (in a sense that is going to be clear in the next chapter). The answer is not obvious; the paraphrase 'we are going to enjoy ourselves because of the reading' seems to capture our understanding of (43) and, hence, this would mean that the events are in the same causal chain. However, this reading does not seem directed entailed by (43) but rather

‘implicated’ so that the causal relation appears only by drawing a (non-necessary) inference. If this is right, ‘to enjoy oneself’ is an activity that is going on at the same time than the activity of reading in relation to the same Actor. Notice that we could say ‘I enjoyed reading your novel because I read many reviews of it first’; in this case the possible causal linkage is translated from the actual reading to the suggestions made by critics. I will delay my answer until the next chapter.

7. CONCLUSION

In this section I have described the semantics of SGC_{C-CIRC} as consisting of a relation between two event descriptions that satisfy the following three constraints: participant sharing, time interval overlapping, and the presence of dynamic eventualities. Further, I have proposed that these constraints constitute a semantic category – Circumstance Sharing- that can be based on independently motivated notions such as stage level predicates and circumstances and, ultimately, on the internal structure of event descriptions and events. Finally, I proposed that the asymmetries that are intrinsic to the interpretation of SGC_{C-CIRC} are not solely semantically based but they arise from the interaction between verb meanings and the default information structure associated with SGC_C .

CHAPTER V

A DEFINITION OF MEANS AND THE SEMANTICS OF $SGC_{C-MEANS}$

1. INTRODUCTION

This chapter describes the meaning of a subtype of SGC_C that I will call ' $SGC_{C-MEANS}$ ' and is exemplified in sentence (1) below.

- (1) Juan entró a su oficina corriendo.
Juan entered to his office running
'Juan ran into his office'

The two events expressed by the respective clauses are related by a tighter connection than relational structure sharing (i.e. Circumstance sharing). Intuitively, a speaker uttering (1) means that the event of walking mediates the change of locations involved in the entering event. The events e_G and e_M holds a connection that goes beyond sharing of participants and temporal traces since e_G is part of the central relation that structures e_M , namely, the change of location. This type of connection has been characterized as a 'Means' relation (Goldberg 1995) or as a 'Manner' relation (Talmy 1985, 2000); in both cases the relation connects events in the same 'causal chain' (Croft, 1991). I will use the notion of Means to characterize intuitively the relation between the events in $SGC_{C-MEANS}$. I take Means to be an event-building relation in the sense that it constitutes a single event out of two eventualities. This chapter can be seen as an attempt to give a precise definition of the Means concept.

I argue here that the notion of Means as it has been used so far in the Semantics literature is not transparent and, in consequence, it cannot be used as is for the description

of the semantics of $SGCC\text{-}MEANS$. Therefore, I propose to define the semantics of $SGC_{C\text{-}MEANS}$ as a relation between two events that satisfies the following conditions: Partial Identity and an Asymmetry Condition on the event descriptions. These two notions, that are extensively discussed and defined below, are proposed as a characterization of the semantic properties of the concept ‘Means’ and, hence, they characterize the semantics of $SGC_{C\text{-}MEANS}$.

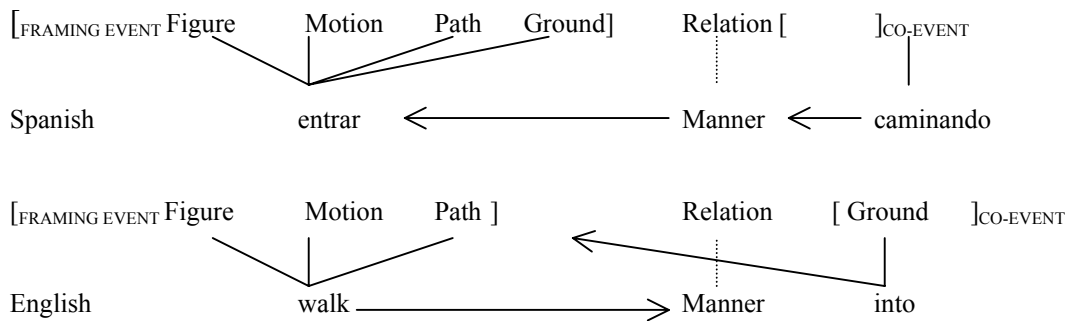
2. PREVIOUS ACCOUNTS: MANNER IN TALMY 1985, 2000

The description of $SGC_{C\text{-}MEANS}$ in Talmy 1985, 2000 has been the most influential work in this matter. The scope of his proposal is larger than the more modest one undertaken here since it attempts at characterizing the typology of the lexicalization and expression of the semantic components of motion events. The alternative lexicalization patterns are captured as different parameters in the linking between two semantic schemas. These schemas contain two event-types – the Framing event and the Co-event- and a support relation. Specifically, the Framing event and the Co-event can be related by Manner, Cause, Enablement, etc. Further, events themselves have an internal structure that is constituted by different event participant categories such as Figure, Motion, Path and Ground. The different confluences of those components into either the Framing event or the Co-event define a typology of languages. For example, English conflates Manner and Motion into a single lexical item and expresses the Goal by a PP ‘satellite’ as shown in (2).

(2) John ran into his office.

In contrast, the typical Spanish pattern for the description of Motion events conflates Motion and Goal into a single verb (i.e. *entrar* ‘enter’ in (1)) and represents Manner of Motion in a different predicate (i.e. *correr* ‘run’ in (1)). Spanish conflates Motion and Goal in the Framing event and expresses Manner of Motion in the Co-event; on the contrary, English conflates Manner and Motion in the Framing event and the Goal is expressed in the Co-event, as shown below.

(3)



Formally, Spanish expresses Manner through syntactic means; namely, its expression requires the combination of free morphemes in a specific phrasal structure. Further, Manner is encoded in an optional constituent, which means that speakers have the choice of expressing it or not. In contrast, the representation of Motion events in English necessarily involves Manner since it is lexically encoded. This contrast between obligatory and optional expression has crucial impacts in the way speakers of those languages categorize and narrate their experiences as Slobin (1994, 2000) has demonstrated in a number of works.

This schema represents the basic semantic properties of $SGC_{C-MEANS}$ as instantiated in (1) and, hence, it will be taken as the foundation of my discussion of the

meaning of the construction. First, it represents the semantics of $SGC_{C-MEANS}$ as a relation between two eventualities. This is consistent with the view supported in the previous chapter in relation to SGC_C in general, which goes against the standard view that we dubbed ‘the single event semantics’ for SGC_C . Recall that in relation to Spanish, it has been suggested –cf. Fernandez Lagunilla 1999- that sentences like (1) describes a single event with two verbs. On the contrary, the Lexicalist Criterion on Event identity predicts that (1) describes two Events. Talmy’s schema also captures the necessary components of any Motion event (i.e. Figure, Path, Motion and Ground) and, crucially, reflects the fact that Manner (or Means in our sense) is not among them. Finally, it presents Manner as one of the support relations that enable speakers to constitute a complex event (i.e. a Macro-event) out of simpler events.

Schema (3) is limited to Motion events whereas the semantics of $SGC_{C-MEANS}$ is not and, hence, the question is what is the meaning of Manner (Means in our sense) for non-Motion events such as the one in sentence (4) below.

- (4) El profesor defendió su postura señalando la baja actividad económica.
 The professor supported his position pointing the low economic activity
 ‘The professor supported his claim by pointing to the low economic activity’

It will be shown later in the chapter that the event of *señalar* ‘pointing’ is related to the event of *defender* ‘support’ by a Means (Manner in Talmy’s sense) relation in this example and there is no Motion involve.

The description of $SGC_{C-MEANS}$ I present in this chapter differs from the schema in (3) in that this schema represents Means as an external relation that connects two independent events just as, for example, the relation of Consequence can connect two individual events; that is, two events that constitute a larger event (Macroevent in

Talmy's terms). In contrast, I argue that the notion of Means (i.e. Talmy's Manner) can be and needs be characterized in a more specific way than the description in the schema above in that Means relates internal parts (subparts) of these events. More precisely, I argue that the $SGC_{C-MEANS}$ presents two events holding the mereological relation of event overlapping; the events share a subevent. Further, I claim that the abstract definition of event overlapping is specifically instantiated in this construction in the following sense: the two events share at least participants, a distinctive relation between them and their circumstance.

Those are claims about the events in world as described by $SGC_{C-MEANS}$. In addition, schema (3) presupposes an intrinsic asymmetry between Framing and Co-event, but it is not clear what the source of it is. That is, 'Co' in the label of one event seems to suggest a qualification of the event such that it is presented as a dependent event in relation to the Framing Event. Ungerer and Schmid (1996) argue that the asymmetry is motivated in the fact that the Framing event contains the Path, which is the central component of Motion events. I think that there is a problem with this view; namely, it presents the asymmetry as entirely independent from the relation between the events, which in this case is Means (Talmy's Manner). The events are intrinsically asymmetric independently of the relation between them; just by the fact that they are Motion events and one of them contains a Path but not the other, then the events are asymmetric. In contrast, I try to make clear that the relation of Means is asymmetric in that it assigns different roles to its event participants. Further, this asymmetry is reflected on a constraint on the event descriptions –not the events– such that the gerund event

description is more informative than the main clause event description *in relation to the share subevent*.

The presence or absence of a Path component cannot explain the asymmetry in the Spanish sentence in (1) since both events contains a Path (i.e. *entrar* entails a Path but this is also entailed by *correr*), however, the sentence is not commutative. The asymmetry, as I argue, has to come from the Means relation.

The notion of Means in $SGC_{C-MEANS}$ in Spanish is not necessarily the same concept as the notion of Means in English. In Spanish Means is basically a mereological relation between two events; it implies the juxtaposition of two events whereas in English it is a relation among participants of a single event. The Means of Motion introduced by the verb ‘run’, for example, is not a different event from the Motion in schema (3). In this schema, Motion is rather an abstract predicate and it is not intended to introduce an event variable. But, even if it were the case that it is associated with an event variable, it will have necessarily the same value as the variable associated with the (semantics of the) verb ‘run’; it would be entirely different, hence, from the representation in Spanish where two independent events happen to overlap.

The presence of two notions of Means would explain their different connections to the event schemas in the diagram above (i.e. English relates it to Core event and Spanish relates it to Co-event) and, ultimately, their different linkage to syntactic structure.

3. A CHARACTERIZATION OF MEANS AS PARTIAL IDENTITY AND ASYMMETRY

The description of the semantics of (1) requires a detailed analysis of the meaning of the verbs in it. I propose that the relevant entailments associated with *entrar* ‘entrar’ are the one listed in (5) below whereas those that are associated with *correr* ‘run’ are described in (6).

- (5). (i) there is a change of state in which:
- a. a participant x is in a state s_M .
 - b. in s_M x is located in an enclosure (office) at time t_{M2} .
 - c. at t_{M1} x was not located in that enclosure.
- (ii) in event e_{MA} x moves through a Path from not-at-the-office to at-the-office (hence, x is a Figure, Theme or Actor).
- (iii) e_{M-A} and s_M are proper parts of e_M .
- (6) (i) there is a Participant y in event e_G at t_G .
- (ii) y moves through a Path (hence, y is a Figure, Theme or Actor).
- (iii) the movement is performed in a particular manner: iteratively jumping forward moving forward one leg while holding the other one back in the air.

The entailments listed in (5) determine that *entrar* is associated with an event e_M constituted by two subeventualities; namely the event e_{MA} and the state s_M . The first subevent is an event of motion where a Figure/Theme moves along a Path at t_{M-1} ; the second subeventuality is a state s_M that contains this Figure/Theme located at an enclosure that constitutes the end of the Path (i.e. Goal). In turn, *correr* involves an event e_G in which a Figure/Theme moves along a Path in a specific Manner.

The meaning of (1) is only partially captured by the entailments in (5) and (6) in the sense that the mere addition or conjunction of these lists does not include a set of identity relations (i.e. co-reference relations) among event participants that are necessary components of the meaning of (1). Intuitively, the Theme (i.e. the moving participant) in the events is identical; both events take place at the same time subinterval; and, crucially, the motion of the Theme along a Path is also identical.

Speakers seem to have no problem grasping these co-referential connections. How do they derive them? In SGC_{C-CIRC} the relation involves only the sharing of a participant and a spatio-temporal circumstance; but, $SGC_{C-MEANS}$ represents a more complex set of relations. The question is how speakers know when they are dealing with one or the other construction given that they do not differ in any overt marker. I will assume throughout this research that the difference in meaning between SGC_{C-CIRC} and $SGC_{C-MEANS}$ is encoded in the constructions such that they are associated with semantic contents that do not derive from the semantic properties of their constituents. In other words, Manner and Means are set of constraints associated with the overall structures.

3.1 PARTIAL IDENTITY

I propose that the meaning of (1) can be characterized by assuming that there is a construction –i.e. $SGC_{C-MEANS}$ – associated with a semantic constraint requiring ‘partial identity’ of events. Partial Identity is a relation between two event descriptions that satisfies the following constraints:

- a. Event overlapping
- b. Asymmetry

In turn, Event overlapping is associated with the satisfaction of two necessary conditions:

- a. 1. Sharing of a relation.
- a.2. Incrementality

3.1.1. EVENT OVERLAPPING

‘Event overlapping’ is a relation that Krifka (1998) characterizes with the following formula.

$$(7) \quad \forall x, y \in U_P [x \otimes_P y \leftrightarrow \exists z \in U_P [z \leq_P x \wedge z \leq_P y]]$$

This relation requires two events to share a part; hence, there is a third event that is a subevent of both events in the overlapping relation. The interpretation of (1) determines that the entering event is carried out by running; that is, e_G is part of the process that leads Juan in e_M to its Goal (i.e. the office). That is, the two events share a relational structure – namely, they share the moving entity and the spatio-temporal circumstance-, but there is more since the running event is part of the process that leads to the entering. From a semantic perspective, the specificity of this construction is precisely that it conveys the presence of an event that is the effect of the overlapping of e_G and e_M .

It might be thought that the relation ‘proper part of’ (i.e. $e_G \leq_E e_M$) hold between e_G and e_M in *SGCC-MEANS*. In fact, there are instances of the construction that satisfy a ‘proper part relation’. The sentence below is one such example.

- (8) ‘...asaltaron la sucursal Chacras del Nación robando cien mil pesos...’
 assaulted-they the branch Chacras of.the Nation stealing one.hundred thousand pesos
 ‘They stole one hundred thousand pesos when they broke into the Chacras branch of the
 National Bank’

When combined with an NP denoting entities such as banks as in the case above, the verb *asaltar* ‘assault’ implicates robbery; it does not entail robbery since it is a cancelable statement as attested below.

- (9) Los ladrones asaltaron el banco pero no pudieron llevarse nada.
 The thief assaulted the bank but not could-they steal nothing.
 ‘The thief broke into the bank but they could not steal anything’

The fact that it is implicated rather than entailed does not undermine the fact that the robbery is a proper part of the event described by *asaltar*; this verb denotes an event that unless explicitly stated to the contrary contains a subevent of robbery. Therefore, this example shows that $SGC_{C-MEANS}$ can express proper-part relations. However, it would be too strong to associate the meaning of $SGC_{C-MEANS}$ with a proper-part relation because of examples like (1). In this case, the running event might be larger than the entering; namely, Juan's running might have started before the entering and it might have continued long after it. Further, ' $e_M \leq_E e_G$ ' does not seem appropriate either because the final state of entering –namely, the end of the path- does not need to be also a running event, hence, Juan's running does not need to include the final state of entering. Sentence (1) allows for a running event larger than the entering event, but it does not requires it.

Since Partial Identity requires 'event overlapping', it presupposes the weaker concept of 'Circumstance Sharing', which is what makes $SGC_{C-MEANS}$ a subtype of SGC_C . Also, we assumed in the previous chapter two different structures in our semantics, an Event and a Time structure related by an homomorphic relation from Event parts to Time parts; hence, event overlapping entails time interval overlapping, and this is precisely what is needed to characterize the semantics of $SGC_{C-MEANS}$.

Overlapping imposes strict conditions to a relation between two entities, in this case, events. Yet, it remains as a formal statement that is not instructive about the effects that overlapping carries on the internal structure of the events under this relation. I propose that overlapping on Events is associated to two necessary conditions: Sharing of a distinctive semantic relation and incrementality.

3.1.2. SHARING OF A DISTINCTIVE RELATION

A property of the semantics of $SGC_{C-MEANS}$ is the sharing of a ‘distinctive semantic’ relation between the two event descriptions. The two events share a participant (i.e. Juan) and a circumstance (i.e. the spatio-temporal domain in which that participant acts); but they also share the relation of Translational Motion that is entailed by -and, hence, part of the meaning of- both verbs as shown in (5) and (6). What this constraint does it to say that the Motion in both events is identical; the participant Juan is related to one single Motion rather than two. Since Motion is a relation between a Figure and a Path, this constraint determines that the Path is also identical in both event descriptions.

This constraint conveys the implication in the case of (1) that the two event descriptions are associated with verbs that belong to the same semantic class. In the case of (1) the two verbs belong to the same major subclass define as Motion verbs. This is what is expected if the two events described by those verbs need to be in an overlapping relation.

The attribute ‘distinctive’ that qualifies the relation refers to two interrelated properties here. First, the relation needs to be distinctive in the sense it must differentiate the event description from other event descriptions. In this sense Translational Motion is a distinctive property in so far as it defines a restricted class of event descriptions (and events); in contrast, the relation of Circumstance is not distinctive since it is necessarily part of every event description and every eventuality.

Second, the relation is distinctive in a more substantial way. In terms of the hierarchical structure proposed in the previous chapter for the description of events, a clear division was made between immediate parts and non-immediate parts. This relation

is distinctive in the sense that it always identifies a (non-necessarily proper) subpart of the event; that is, it defines a subevent.

There is no other construction in Spanish that can express the same content. For example, Adverbial Temporal Constructions (ATC) that allows simultaneous events cannot express eventualities that share a distinctive relation, as shown below.

- (10) a. #Juan caminaba mientras entraba a su oficina.
Juan walk-IMP while enter-IMP to his office
'Juan walked into his office' (intended meaning)
- b. # Juan caminó cuando entraba a su oficina.
Juan walk-IMP when enter-IMP to his office
'Juan walked into his office' (intended meaning)

None of those sentences encodes directly the sharing of Translational Motion in the way that $SGC_{C-MEANS}$ does. Instead, ATC presents the two events as merely co-occurring eventualities. The oddity of the sentences above is a consequence of the presence of $SGC_{C-MEANS}$ in the Spanish system; that is, being $SGC_{C-MEANS}$ specialized in the expression of overlapping events, Spanish speakers cannot choose to express this relation with a construction such as ATC that is associated with merely co-occurring events. At best, ATC can express overlapping via inferential processes.

It should be noticed that the examples above constitute also an important piece of evidence for the thesis that we are developing here; namely, that event overlapping is 'grammatically' encoded in $SGC_{C-MEANS}$ (as opposed to deriving it inferentially).

The satisfaction of this constraint is somewhat easy to determine in the Motion domain and, in general, physical relations where perceptible entities move or change state or are located in relation to other entities. It is more difficult to be precise when the

events involve less accessible relations such as mental, psychological or social relations.

This is the case of examples like (11) and (12).

(11) La ministra analizó el proyecto evaluando su impacto ambiental.
The secretary.of.state analyzed the project evaluating its impact environmental
‘The secretary of state analyzed the project judging its impact on the environment’

(12) Julia memorizó el poema releyendoló una y mil veces.
Julia memorized the poem again-reading-it one and thousand times
‘Julia memorized the poem reading it one time after another’

In the first sentence the event of analyzing involves a mental activity that is typically conscious, symbolic and purposeful. The evaluating event involves a mental activity that does not need to be conscious nor symbolic but it presupposes the choice between at least two values. Therefore, even if the shared relations and the common set of entities are not as visible as in the previous examples of $SGC_{C-MEANS}$, it is still possible to identify a mental activity, the (human) entity performing it and its object –i.e. the poem- as the shared elements that indicates a partial identity of events.

A similar reasoning applies to example (12) since the process of memorization is a mental activity that presupposes some intellectual experience between a cognizer and its object. The reading event makes explicit the experience that was a necessary part of the memorization process.

We are now in a better position to analyze examples that in the previous chapter seems to fall in a fuzzy area between SGC_{C-CIRC} and $SGC_{C-MEANS}$, like the one we repeat in (13).

(13) ‘...estamos seguros que nos vamos a divertir leyendo su novela ...’
are-we sure that us go-AUX-we to have.fun reading his novel
‘... we are sure that we are going to enjoy ourselves reading his novel...’ (Oral, RAE)

The verb *divertirse* ‘enjoy-yourself’ presupposes that the Actor is engaged in an activity; it is not a state predicate denoting the mental or psychological state of a participant but it describes this state as a consequence of an activity. This is precisely the activity described by the gerund clause. Hence, we conclude that this sentence instantiates the SGC_{C-MEANS} construction since the main event description presupposes a sub-event, which is described by the (event description associated with the) gerund clause.

It might be thought that there is a causal relation in example (13) in the sense that the reading event caused the enjoyment/amusement event (a causal relation of the sort involved in ‘carrying’ where the Actor is constantly causing the change of location of the Figure/Theme (Talmy, 2000)). I believe that this is not so on the following ground. Causality, as it is typically encoded in languages, is a relation between sequences of events such that the caused event is a change of state/location. This change of state is precisely what is missing in the relation between the two events above; that is, *divertirse* does not entail that the Actor was not in that state before nor that he or she is constantly changing states.

The purely linguistic correlate of the need of share a distinctive relation is that both verbs belongs to the same verb class in the sense of broad categories such as Motion or Verbal or Mental predicates. There are some examples where this statement is not obviously true simply because of a metaphorical use of the predicates. This is the case of the example (14).

- (14) ‘... Onetti no lo hace teorizando, sino que avanza conjeturando, lento, puliendo ...’
 Onetti not it-ACC does theorizing, but that advance speculating, slowly, polishing
 ‘...Onetti does not theorize, he rather progresses by speculating, slowly, polishing...’

The verb *avanzar* ‘advance’ in Spanish is a motion verb but in this context is used metaphorically to talk about the intellectual progress along the Path of an analysis. In this context, the verb *conjeturar* ‘speculate’ or, more literally, ‘make conjectures’ describe the Means of that mental progress. Every conjecture is presented as a step forward in the analytical process.

3.1.3. THE CONSTRAINT ON INCREMENTALITY

The relation of ‘incrementality’ that characterizes the semantic connection between the two events e_M and e_G in $SGC_{C-MEANS}$ is, in fact, a property of every Partial Identity relation between events and, thus, it is not an exclusive of this construction. The notion of ‘incrementality’ was originally introduced to capture the relation between an event and its affected participant in cases where the progression of the event necessarily conveys a proportional increase in the degree to which the object is affected to the completion of the event (Dowty 1991). Jackendoff (1996) and, more specifically, Levin and Rapaport (1999) apply this property to event relations, and this is the notion of incrementality used here. In this sense the relation of Partial Identity between events entails that the progression in the running event in (1) involves necessarily a proportional progression in the entering event for the event part that they share. That is, $SGC_{C-MEANS}$ requires a systematic correlation between the unfolding of the event e_G and that of the event e_M ; that is, the correlation is only required for the relevant portion of the event that is under the Partial Identity relation.

Notice that the proportional progression involved in the notion of ‘incrementality’ is not merely temporal; otherwise, the constraint would be vacuously satisfied by every

two co-occurring eventualities. It is situational as we can illustrate in (1) by the progression along the Path of the Actor participant, this progression is necessarily proportional for both eventualities.

The next sentence might constitute yet another example at the boundary between the semantics of SGC_{C-CIRC} and $SGC_{C-MEANS}$. I propose here that in fact it represents an instance of SGC_{C-CIRC} . The main verb is a stage-level state predicate and the gerund clause introduces an activity.

- (15) El actor se encontraba en Caracas festejando su primer éxito.
The actor REF find-IMP in Caracas celebrating his first success
'The actor was in Caracas celebrating his first success'

The CiS constraint is satisfied since the main event gives the circumstance of the gerund event; both events share a participant, a time and a place. Since the main event description does not convey more information than that, the question is if this is enough to satisfy a Partial Identity relation. I claim that the two events do not satisfy the condition required by incrementality, which would entail that the unfolding of the celebrating event is proportional to the unfolding of the state of being at Caracas. Being the main eventuality a state, it seems inappropriate to talk about 'unfolding'; states are homogeneous through time and, hence, they cannot be described as 'unfolding'. Therefore, the constraint is not satisfied.

Interestingly enough, the sentence in (16) shows that the inverse of (15) is also possible.

- (16) El actor festejó su primer éxito encontrándose en Caracas.
The actor celebrated his first success finding-REF in Caracas
'The actor celebrated his first success while being Caracas'

The meaning of (15) and (16) are not exactly equivalent, however; even if truth-conditionally identical to (15) in almost all respects, the last sentence presents the gerund event as a sort of reference event to locate the main event; it is the circumstance of the main event. In contrast, (15) presented the gerund event as one way of being in Caracas; namely, the gerund clause expresses a Manner of what is described by the main event.

Interestingly enough, the reversal (16) of the main and gerundial example of the SGC_{C-CIRC} (15) allows preposing of the gerund clause as shown in (17) below. In contrast, preposing is not acceptable with (16) as shown in (18).

- (17) Encontrándose en Caracas, el actor festejó su primer éxito.
 finding-REF in Caracas the actor celebrated his first success
 ‘While being in Caracas, the actor celebrated his first success’
- (18) *Festejando su primer éxito, el actor se encontraba en Caracas.
 celebrating his first success, the actor REF found-IMP in Caracas
 ‘The actor was in Caracas while celebrating his first success’ (intended)

However, (17) is not really an instance of SGC_{C-CIRC} but of SGC_A ; the gerund event does not only give the spatio-temporal circumstance of the main event but it is also implied that being in Caracas was a necessary condition of the celebrating event e_M .

3.2. THE ASYMMETRY CONSTRAINT

The relation of Means that constitutes the semantics of $SGC_{C-MEANS}$ is itself asymmetric and, in consequence, determines that this property characterizes the meaning of the construction. Means assigns different roles to its arguments. In particular, I claim that the relative information load contained in the event descriptions that fills these argument positions of a Means relation differ.

In other words, the relation ‘Means (a, b)’ assigns different roles to its event arguments and, in consequence, they are not mutually interchangeable (i.e. *Means (b, a)). Let’s call the role that fills ‘a’ ‘Whole’ and the role that fills ‘b’ ‘Means-of’. *The idea is that the participant cannot interchange their roles without modifying the relation itself.* In example (1), *entrar* cannot be Means of *correr*; only the reverse relation is semantically acceptable.

Notice that this asymmetry cannot be derived from Partial Identity, which is a relation that assigns symmetric roles to its arguments. This means that if ‘a’ overlaps ‘b’, then ‘b’ overlaps ‘a’; further, if ‘a’ shares a relation with ‘b’, the reverse is also true; finally, if ‘a’ has an incremental relation to ‘b’, the reverse is also true. Therefore, none of the properties that characterize Partial Identity are asymmetric.

I propose that the asymmetric properties of $SGC_{C-MEANS}$ derive ultimately from the difference in information load in the two event descriptions. That is, the construction –and the relation of Means- require the two event descriptions to have different information loads *in relation to the event that they share*. Thus, regarding the shared subevent e_M , $\delta(e_M)$ entails the translational motion of a Figure along a Path; this information is also contained in $\delta(e_G)$, but in addition, $\delta(e_G)$ also entails that the Figure iteratively raises a leg and moved it forward while keeping the other one back in the air (entailment ‘iii’ in (6)). That is, regarding the shared subevent $\delta(e_G)$ is more informative than $\delta(e_M)$ and, hence, the two event descriptions contain different amounts of information. In fact, $\delta(e_M)$ does not offer any information that is not present also in $\delta(e_G)$ regarding the shared subevent. The concept of information load of an event description in relation to an event amounts to the list of entailments that are true of the

event. In (1), the entailments associated with one event description are subsumed by the entailments of the other description which, in turn, contains some entailments that are absent in the other.

This asymmetry cannot be asserted in absolute terms; namely, it is not the case that the event description associated with *running* is more informative than the event description of *entering* in every possible situation. There is no criterion to evaluate such statement in this context and, in fact, it is irrelevant for our purposes here. The difference in information load can only be evaluated in relation to the shared subevent, which they share because of the semantics associated with $SGC_{C-MEANS}$.

The assertion that one description is more informative than the other in absolute terms –namely, regardless of the particular context- is false. *Entrar* is more informative about the end of a Path since it gives information about it –i.e. it is an enclosure of some kind- and about the position of the Actor in relation to that Path. This information is absent in $\delta(e_G)$; thus, in relation to the subeventuality of e_M that is not shared, $\delta(e_M)$ is more informative.

It has been noticed (Aske 1989, Slobin 1994) that $SGC_{C-MEANS}$ tends to involve a telic event descriptions as main verbs and atelic event descriptions in the embedded clause. This is a correct observation, but the asymmetry between the two arguments positions of Means cannot derive from it. The Means relation is sensitive to the different properties of its arguments but it is so because it is itself asymmetric. It seems a reasonable assumption that the different intrinsic properties of arguments cannot make a relation asymmetric; rather, a relation is asymmetric only if it assigns different properties (i.e. roles) to its arguments and, thereby, can be sensitive to their properties.

In fact, it is not anomalous for $SGC_{C-MEANS}$ to contain atelic event descriptions as shown below.

- (19) a. Juan caminó rengueando por el parque.
Juan walked limping in the park
'Juan was limping while walking in the park'
- b. #Juan renguea caminando en el parque.
Juan limped walking in the park

There is only one possible assignment of the two event descriptions to the argument positions of Means, namely the one shown in (19), in which the limping event is the Means of the walking event. Both verbs imply motion; furthermore, *caminar* is also a Manner of Motion verb. However, *renguear* is more specific than *caminar* in relation to the subevent they share. It says that the entity walks leaning towards one leg while stepping on the other in a quick movement; that is, limping implies walking. On the contrary, the limping is rather unexpected from the walking event, which is a sense in which e_G is more informative.

Example (19) is also relevant because it might seem at first that its gerundial event description cannot be more informative than the main event description.

- (20) El técnico les pidió que trabajen dando énfasis al cambio de velocidad
The coach them-DAT asked that work-SUBJ-3pl givin emphasis to the change in speed
'The coach asked them to work giving emphasis to the change in speed'

The gerund event description denotes an event e_G that is included in the main event e_M ; that is, the changing of speed (or emphasizing the change of speed) is part of the working activity. However, the hypothesised asymmetry in informativeness still holds because the main verb conveys the description of a generic activity ('work') that the gerund event description specifies; it introduces an event that is part of the main activity.

It is also important to notice that the main verb is not a Motion verb; in fact, it is not even a spatial verb and, hence, the internal structure of the verb is less obvious. ‘Work’ also has different senses and sentence (20) target only one of them. The English ‘work’ as the Spanish *trabajar* denotes primarily an activity inserted in the social frame of earning a living; this involves concepts such as regulations, commitment, transactions and so forth. In turn, the verb can be used in a less literal sense as any activity that is focused on a specific goal, a goal that is not itself the final goal. This is the sense that is targeted in (19); hence, the main verb denotes a generic activity –namely, an activity that has many alternative ways to be performed- and the gerund specifies one of its ways. Therefore, the two event descriptions are not identical because the ‘change-of-speed’ specifies the work and the working event description set the change of speed in a frame that take it to be a means but not the final goal.

SGC_{C-MEANS} involves Partial Identity and Asymmetric information load. It is rather clear that the information contained in the event descriptions in (19) are asymmetric and that the main event description allows for alternative events –one of them is specified by the gerund clause. The question on (19) would be about the sharing of a relation. Which relation could that be? Since the decomposition of non-spatial verbs is harder, the only possible sharing is the activity itself. Namely, ‘emphasize’ is itself an activity; hence, the sharing is licensed by the meaning of the individual verbs, which is what we would predict.

3.3. ANCILLARY PROPERTIES

There are two important properties associated with the meaning of $SGC_{C-MEANS}$ that even though they are epiphenomenal deserve attention.

3.3.1. The Alternative Description Constraint

This is a property related to both Partial Identity and Asymmetry in information load. It has been suggested that it characterizes the relation of Manner in general, as this concept is understood in Ernst (2000), which is rather closer to our sense of Means.

For example (1) in particular, this is a constraint related to the internal properties of the event described by *entrar*. More generally, it requires the event description containing less information load to allow for *different alternatives* regarding the motion of the Figure through the Path. Although *entrar* requires Translational Motion, it does not specify any particular way of Motion; it is vague regarding manner of Motion. This is the information in the meaning of *correr* (its entailment ‘b.iii’) that is not present in the meaning of *entrar*. Thus, the alternative description constraint is a condition presupposed by Asymmetry under Partial Identity. Namely, the event descriptions $\delta(e_M)$ needs to allow for alternative event description to enter in an event relation that requires Partial Identity and Asymmetry of information.

The analysis presented above correctly predicts which of a pair of verbs must be realized as a gerund and which as a main verb in order to constitute a grammatical instance of $SGC_{C-MEANS}$ such as the one presented in (20).

- (21) a. Juan canta gritando.
Juan sings screaming
‘Juan screams when he sings’

- b. # Juan grita cantando.²⁴
Juan screams singing
'Juan screams when he sings'

Of the two verbs *cantar* and *gritar*, the screaming event must be the Means of the singing. Here is why. Both verbs belong to the class of sound emission verbs; hence, their respective event descriptions share a subevent of sound emission. *Cantar* gives information about the final state of that sound emission in the sense that what is being sung is a song/symbolic object, but not about the properties of the sound being emitted; it is the verb *gritar* that qualify this sound along a scale such as 'loud'.

The constraint on alternative description can be seen as a corollary of the constraint on asymmetry, which states that given two event descriptions related by Means, the ones that is more informative regarding the shared eventuality needs to function in the roles 'Means-of'. Therefore, the event description that acts in the other role –i.e. 'Whole'– is required to presuppose different alternative realizations of its relation (i.e. in the case of (1), the movement relation).

3.3.2. THE IMMEDIATE SUBCLASS CONSTRAINT

The difference in information load is connected to lexical properties. $SGC_{C-MEANS}$ requires the two event descriptions to share a relation, which translates as a constraint requiring the verbs to belong to the same semantic class; i.e. the verbs *caminar* and *entrar* are both motion verbs. In addition, the verbs must have different information load (the asymmetry constraint). The consequence to the conjunction of both constraints is

²⁴ The '#' symbol means semantic anomaly by which I mean that the sentence makes little sense in a normal context. In a normal context sentence 'b' would mean that the Actor screams so nicely that he sings something, which requires special circumstances to make sense.

that the verbs need to belong to the same semantic class but not the same immediate semantic class (for them to have different information load). This is why sentences like the ones below are impossible.

- (22) Juan caminó *corriendo/*gateando/*trotando a su casa.
 Juan walked running/ crowling/ jogging to his house
 ‘Juan walked home *running/*crowling/*jogging’

4. EXPANDING THE DATA

In this section I would like discuss some particularly challenging cases of SGC_{C-COMP}. Although the result is somewhat marginal, it is not entirely impossible to combine verbs like *saltar* ‘jump’ or *levantar* ‘raise’ with *caminar*, contrary to the apparent prediction of the asymmetry constraint.

- (23) Yo solía caminar saltando cuando era chico.
 I used.to-IMP walk jumping when was-IMP child
 ‘I used to walk jumping when I was a kid’

The speaker that utters (23) means that he walked, but not in a prototypical way such that he raised his legs higher than prototypically expected. Notice that the meaning of ‘jumping’ -not of ‘walking’- is what has been somehow ‘coerced’ to mean something ‘within the walking situation’. Thus, ‘walk’ and ‘jump’ belong to the class of Motion verbs; only ‘walk’ is a Translational Motion verb, and within this class, it is a Manner of Translational Motion verb; in turn, only ‘jump’ entails direction of Motion -i.e. ‘up’- (which is different than ‘directed’ Motion since this one involves a Goal).

This marginal example makes more evident the underlying semantics of SGC_{C-MEANS} in that it reveals the way in which the embedded verb modifies the main verb. The verb ‘jump’ gives information about the Motion of the Actor in ‘walk’; that is, its

modification targets only the relation that is shared by both event descriptions, it does not directly modify the translation per se but only the upward movement of the legs that is involved in the Manner of Motion in ‘walking’.

Why is it that ‘jump’ rather than ‘walk’? Notice that reversing the main and gerund verb is impossible, as (24) shows.

- (24) #Juan salta caminando.
 Juan jumps walking
 ‘Juan walks by jumping’

The only possible explanation for the oddity of (24) is that $SGC_{C-MEANS}$ is, as we have argued, an intrinsically asymmetric construction. This asymmetry is due to the required presence of more information in the ‘Means-of’ argument of the Means relation (i.e. the argument expressed by the gerund). Example (23) confirms our prediction: in relation to Motion, ‘jump’ is more informative since it gives the direction (i.e. ‘up’), which is absent in ‘walk’. Hence, we cannot reverse the verbs as in (24) because of the same reason.

A different constraint can be also postulated in relation the extension of the events involved; let’s call it the ‘extension constraint’. For example, it can be said that the asymmetry is based on the fact that the Means-of event needs to be smaller than the ‘Whole’ event. In the case of (23) this would predict that ‘jump’ is smaller since it lacks a Path, which is present in the walking event. In the case of example (1), the measure for the extension of the events would not be the Path since it is present in both events but the Goal.

Both constraints –namely, the constraint on information load and on extension– are perfectly compatible in the sense that they do not exclude nor necessarily implicate

each other (hence, they can be both informative). I have chosen to stress the role of the information load constraint because it reveals the internal structure of the connection between the events and the modification relation between their respective descriptions.

There are examples where is hard to decide if their semantics involves Means or Manner; that is, if they belong to $SGC_{C-MEANS}$ or SGC_{C-CIRC} . Ultimately, the fact is that beyond a large mass of core examples, the distinction may become fuzzy.

(25) ‘Si yo fuera presidente’ 10/18/83 TVE 2 (Oral corpus, RAE)

... un chico amenazar (sic) a su padre que está operado de cancer de garganta diciendo
...a boy threaten to his father that has undergone.surgery of cancer of throat telling

que le va a rebanar el cuello ...
that him go to cut the throat

‘...a boy threatened his father, who recently underwent throght cancer surgery,
(by)telling him that he is going to cut his throat...’

One possible analysis of this sentence is that the sequence *amenazar ... diciendo* constitutes an instance of SGC_C . The question is which subtype of SGC_C is involved. It seems clear to me that it has to be $SGCC-MEANS$. First, the two event descriptions not only satisfy CiS but in addition they share a semantic relation; that is, *amenazar* ‘warn’ is a verb that involves the utterance of a symbolic object (typically linguistic), and *decir* ‘tell’ is also an utterance verb that gives more information about the kind of object that has been uttered.

This type of semantic relation between utterance verbs constitutes a frequent use of the construction because the gerund allows the speaker to expand the description of the utterance event encoded in the main clause. A similar example is given below.

(26) Oral, Argentina’s Congress (Oral corpus, RAE)

...el señor ministro ha explicado la propuesta diciendo que las nuevas posibilidad de la

the sir secretary.of.state has explained the proposal saying that the new possibilities of
cultura actual ...
the modern culture

‘...the secretary of state explained the proposal by saying that the new possibilities of our
culture ...’

This example challenges the way in which we phrased the asymmetric constraint; that is, this constraint predicts that the gerund event description needs to make the main event description more precise by giving more information about some of its components. The problem is that ‘explain’ seems to be at first much informative than ‘say’. My answer is that the entire event description introduced by the gerund is more informative than the main clause regarding the verbal content that they share. That is, the verb ‘explain’ includes verbal expression but it is not limited to it; the gerund event description elaborates on that verbal part that has been left implicit by the main verb. Thus, regarding to the portion of event that they share, the event description introduced by the gerund has more information. In contrast, ‘explain’ sets the saying event in a larger and more complex context.

Example (27) shows a perception verb with Actor control that represents a clear illustration of the difference between $SGC_{C-MEANS}$ and SGC_{C-CIRC} .

(27) Oral, Telenoticias, Madrid, 1/16/91 (Oral, RAE)

... porque hay que ver toda la serie sufriendo, es que todo le pasa a ella...
because there.is that see all the serie suffering, is that everything her-DAT happens to her
‘...because you have to watch all the episodes [of a certain soap opera] suffering,
everything bad happens to her...’

This sentence instantiates SGC_{C-CIRC} because the relation between the event descriptions does not satisfy the sharing of a distinctive semantic relation; in other words, it is clear that the verb *ver* ‘see’ and *sufrir* ‘suffer’ belong to different semantic classes; the event descriptions satisfy CiS only.

Example (28) illustrates yet a slightly different property of SGC_{C-COMP} because it involves a generic main verb and, hence, makes apparent the idea that the gerund is more informative.

(28) Oral, Televisión, Madrid 12/9/91 (Oral, RAE)

‘...Vengo a interesarme de la injusticia que ustedes han hecho deteniendo a miles de
come-I to learn of the injustice that you have done arresting to thousands people
personas...’
people

‘I come to learn about the injustice you have committed arresting thousand of people...’

The main event description belongs to the class of accomplishment and the gerund event description also gives information about it. Notice that examples like (16) make clear that a constraint requiring the main verb to denote a larger event would have little sense in cases like this one. There is no sense in which the event of committing an injustice is larger than arresting the people; in fact, they are identical such that in this case the constraint on event overlapping is satisfied by the stronger relation of ‘non-proper part of’.

There is a sense in which example (29) would predicted to be an instance of $SGC_{C-MEANS}$ on semantic grounds; however, there is a pause between the two clauses and, in fact, the absence of that pause would make the sentence ungrammatical.

(29) ‘...el valor de las acciones de la petrolera cayó hoy, pasando a valer ...’
the value of the stock of the oil.company fell today, passing to cost

‘...the price of the oil company stock fell today, dropping the price of ...’

The event description introduced by the gerund clause describes a necessary aspect of the main event; namely, if something fell, it goes from one place to another (lower) place. If this is right, the two event descriptions would be characterizing overlapping events; hence, there is no reason for the pause between the clauses or, in other words, there is no reason why (29) needs to be an instance of SGC_A rather than $SGC_{C-MEANS}$. Let’s notice first that the same combination of verbs is not possible in the spatial domain as shown by the semantic anomaly in example (30).

- (30) *El albañil cayó desde el tercer piso, pasando a estar en el suelo.
the construction worker fell from the third floor, passing to stay on the ground
‘The construction worker fell from the third floor ending up on the ground’

Thus, there is something special in example (29) that is licensed by metaphorical extension. There are two non-competing explanation for the difference in grammaticality between (29) and (30). The first presupposes that the event denoted by *caer* ‘fall’ contains a Path with a source but no entailment about its end. In consequence, the final stage of this Path is introduced by the gerund event description and, hence, e_M and e_G form a sequence and are related by a consequence relation. A second option is to accept that there is an overlapping relation between e_G and e_M , but since it is between the final part of e_M and the initial part of e_G , the interpretation is that of consequence and, hence, it is an instance of SGC_A .

In any case, this example confirms the fact that overlapping between e_G and e_M must necessarily involve the initial part of the event e_M . This would be also consistent with my treatment of SGC_{C-O} as a separate subtype of SGC_C ; the mother node –i.e. the general description that includes the more specific ones- requires overlapping whereas

SGC_{C-CIRC} and SGC_{C-MEANS} further specify that this overlapping necessarily include the initial part.

Now I will discuss the type of examples that Fernández Lagunilla (1999) calls ‘illocutive’; they are exemplified below.

- (31) En 1977 Alarcós, siguiendo a Hjelmslev, afirma que en la lengua hay dos planos.
In 1977 Alarcós, following to Hjelmslev, affirms that in the language there are two dimensions
‘In 1977 Alarcós, following Hjelmslev, claims that there are two dimensions in Language’

The ‘following’ event represents a description of the discourse content in the ‘claiming’ event. Thus, this sentence contains the description of two overlapping events and, hence, apparently, would contradict our prediction that this is an instance of SGC_{C-MEANS} rather than SGC_A, since the gerund can be preceded by a pause.

I claim that what is crucial for the understanding of this type of examples is that the gerund event description introduces a statement that is metalinguistic with respect to the main clause in the sense that it introduces a description or evaluation of the content in the main clause. In consequence, the main and gerundial phrases do not describe the same object but rather, the main event is the object of the gerund clause.

Example (32) shows that, in fact, SGC_{C-MEANS} can contain discourse predicates. In this case, the two predicates are at the same discourse level such that there is no metalinguistic relation involved between the two event descriptions.

- (32) ‘...Clinton se pronunció por una Europa unida apoyando la expansion de la OTAN’
...Clinton REF pronounced for a Europe unified supporting the expansion of the NATO
‘...Clinton declared himself in favor of a unified Europe by supporting the expansion of the NATO...’

The ‘by-supporting’ interpretation means that the supporting event is the way or cause of the ‘declaring-himself’ event; in consequence, e_G is a proper part of e_M . This is not,

though, the kind of reading that Fernández Lagunilla would call ‘illocutive’. In contrast, this reading is impossible if the two clauses are separated by a comma.

(33)...Clinton se pronunció por una Europa unida, apoyando la expansion de la OTAN.
...Clinton REF pronounced for a Europe unified supporting the expansion of the NATO
‘...Clinton declared himself in favor of a unified Europe, then, supporting the expansion of the NATO...’

The pause insures that the relation of ‘consequence’ is the only possible relation between the two events. The supporting event is a consequence of the ‘declaring-himself’ event.

Example (34) represents even more noticeably the difference between the illocutive SGC_A and SGC_C .

(34)
‘...el defensor pidió la libertad del preso argumentando una supuesta deficiencia mental’
the defense.attorney asked the liberty of-the arrested.man claiming a supposed deficiency mental
‘...the defense attorney asked for the liberty of the defendant claiming a supposed mental deficiency...’

The main clause describes a speech act –i.e. the asking event- and the gerund clause – which also contains a verbal predicate- describes part of the content of this speech act. The sentence instantiates the construction $SGC_{C-MEANS}$; both event descriptions share a relation (i.e. the verbal activity) and they are asymmetric. This asymmetry rests on the fact that the asking event sets up the whole frame of the speech act by defining its goal (i.e. the request) whereas the gerund event further specify it by exposing the grounding of the request.

A different type of examples that can be source of possible ambiguity that must be addressed is represented by sentence (35).

(35)
‘...el hombre cayó al vacío, al parecer, buscando el hombro de su compañero para
the man fell to-the void, to-the glance, looking the shoulder of his mate for
apoyarse...’

lean-REF

‘...the man fell to the void while, it seems, looking for support in the shoulder of his mate...’

In one interpretation of (35), the looking-for event is not in the same causal chain as the falling event; strictly speaking, ‘to look for’ is a mental activity verb which does not imply movement and, hence, can serve as the circumstance under which the falling event happened. A pause between the clauses conveys this reading for (35) and as such (35) is an instance of SGC_A .

In the other reading of (35), the verb ‘fall’ introduces a movement that is also associated with the prototypical ‘looking-for’ scene. In this scene the person who is looking for something usually moves around and, hence, the whole situation is constructed as a single Macroevent where the movement associated with the looking-for event involves the initial Path of the falling. This coerced reading of ‘look-for’ reclassifies it as a motion verb; in consequence, the two event descriptions share now the motion relation and (35) becomes an instance of $SGC_{C-MEANS}$.

5. THE CAUSAL SUBTYPE OF $SGC_{C-MEANS}$

This section discusses instances of $SGC_{C-MEANS}$ in which the main verbs are causative and I argue that such examples constitute a special subtype of SGC_C along $SGC_{C-MEANS}$ and SGC_{C-CIRC} , sentence (36) is one of such examples.

- (36) El líder paralizó el proceso de paz ocupando territorios.
The leader paralyzed the process of peace occupying territories
‘The leader paralyzed the peace process by occupying territories’

The only possible interpretation of this sentence is that the occupying event caused the paralyzing event.²⁵ The verb *paralizar* is causative; it means that the actions of an entity ‘a’ causes entity ‘b’ to stop performing an activity’. Hence, it presupposes that ‘b’ was not yet still but that it underwent a change of state/location that is caused by some (unspecified) event that has ‘a’ as its causal force or effector. This description of causative verbs is easily modeled in the semantic tradition that uses decompositions of verb meanings (McCawley 1973; Talmy 1976; Van Valin and LaPolla 1997). In this view, causative verbs consist of a relation between two events such that a typically unspecified event or state causes an event of changing state or location. Romance and Germanic languages encode lexically the information that describes these events by specifying in the verb the content associated with the final state of the change of state. The causing event on the other hand is left unspecified by most verbs (but see contra ‘strangle’) and this is precisely the content of the gerund phrase.

I analyze this construction -that I label $SGC_{C-CAUSE}$ - as a subtype of $SGC_{C-MEANS}$. The verb forms introduce two different events that are in a mereological relation in the sense that –according to the meaning of the verb *paralizar*- the event description associated with the main clause contains a causing event that is identified with the *occupying* event. The occupying event overlaps with the causing subevent in the event description associated with the main clause. Hence, e_G is a subevent of e_M ; more precisely, e_G is a proper part of e_M because a proper-part relation is a particular case of event overlapping; the conditions on event overlapping are satisfied by events in proper-

²⁵ Crucially, if there is a pause between the clauses, the construction cannot be SGC_C but SGC_A ; then, its semantics is also completely different, it would mean that the occupying event was a consequence of the stopping event.

part relations. This shows that $SGC_{C-CAUSE}$ is a subtype of $SGC_{C-MEANS}$ and, hence, indirectly a subtype of SGC_C .

There are semantic differences between the $SGC_{C-MEANS}$ illustrated in example (1) and $SGC_{C-CAUSE}$. There is an obvious sense in which $SGC_{C-CAUSE}$ resembles the relation between a predicate and its semantic argument since the main verb has already this event position that the description introduced by the gerund fills. Thus, even if GP is not a syntactic argument, it is a semantic argument. In addition, $SGC_{C-CAUSE}$ is restricted to the presence of a specific semantic relation between the events –i.e. cause- whereas $SGC_{C-MEANS}$ does not impose this constraint.

The same semantics appears to be present also in one of the subclasses of Undergoer controller identified in the previous chapter. That is, cases of SGC_{C-O} seem to satisfy the semantic description given above, as in examples like the one below.

- (37) Juan metió la caja en la habitación arrastrándola. (adapted from Talmy 1985)
Juan put-into in the room the box dragging
'Juan put the box into the room by dragging it'

The question raised by this example would be if the causing event involves the dragging or the dragging is the caused situation. I cannot find any reason to believe that the dragging is not part of the causing event and, hence, the constraints proposed above would not need to be changed.

On the contrary, if we assume that the embedded verb is indeed transitive (with an unexpressed DO, which is not uncommon in many constructions), then, there is no doubt that the embedded event is the causing event as suggested by the English translation and the sentence needs to be analyzed as SGC_{C-CS} , since it does not involve Undergoer control.

An interesting fact to be noticed is that example (37) is not isolated in the sense that this subclass of SGC_{C-O} accepts verbs in gerund position that show the transitive/intransitive alternation that characterizes English medio-passive verbs and that is uncommon in Spanish (which performs the same change using the *se*). Some examples of those verbs are *andando* (in the sense of) ‘function’, *rodar* ‘roll’, *arrastrar* ‘drag’.

It is important to point out the effect of a pause between the clauses in this construction; this is illustrated in the contrast between the two sentences below, the first of them was already given above and it is repeated here to facilitate the comparison.

- (38) El líder paralizó el proceso de paz ocupando los territorios nuevamente.
The leader paralyzed the process of peace occupying the territories again
‘The leader paralyzed the peace process by occupying the territories again’
- (39) El líder paralizó el proceso de paz, ocupando los territorios nuevamente.
The leader paralyzed the process of peace, occupying territories again
‘The leader paralyzed the peace process, so he occupied the land again’

As it is clear from their translations, the first sentence denotes a causal relation in which the occupying event is the causing action that lead to the quitting of the peace process; this is an instance of SGC_{C-CS} . In contrast, the second sentence has the occupying event as a direct consequence of the quitting of the peace process, which instantiates the SGC_A pattern not SGC_{C-CS} .

I argue that the preposing of the gerund clause as in the sentence below constitutes also a change of construction in the sense that it instantiates the subtype SGC_A .

- (40) Ocupando los territorios nuevamente, el líder paralizó el proceso de paz.
occupying the territories again the leader paralyzed the process of peace
‘Occupying the territories once more, the leader paralyzed the process of peace’

This preposing of the gerund is particularly interesting because it seems to maintain the meaning of the SGC_{C-CS} above rather than the meaning of the next SGC_A sentence while constituting an instance of SGC_A . That is, in (40) the occupying event is the causing event as in (38) rather than the consequence as in (39). However, I claim that (40) is an instance of SGC_A because the relation is still ‘consequence’ rather than ‘cause’ since I reserve the last one only for ‘lexical causation’. The concept of ‘lexical causation’ denotes a relation of causation that satisfies in addition the following condition: the two eventualities hold a mereological relation. This is the case of the occupying event and the paralyzing event in (38) since the event description associated with the verb ‘paralyze’ involves a generic causing eventuality as a subevent; since the gerund event description denotes that generic eventuality, the relation between the two events is of ‘proper part’. In contrast, the representation of the events built in (40) presents the occupying event as a whole externally related to another whole (i.e. the paralyzing event) by the relation of consequence. It happens that the main verb is also causative, but this is not what triggers the causal relation, which is built in the construction. In contrast, there would not be a causal relation in (38) if the main verb were not causative itself.

6. CONCLUSIONS ON THE SYNTAX-SEMANTICS INTERFACE

Now that the semantics of SGC_C has been exposed it is the right time to turn back at the syntactic properties of SGC_C to reflect on its interface properties.

It was concluded in chapter II that the most characteristic syntactic property of SGC_C is that GP is a complement to the main verb. This is highly atypical; a common feature of almost every grammatical framework is that complements express information

lexically specified in the meaning of the main predicate. The Completeness Constraint in RRG, the Projection Principle of Principles and Parameters, the Completeness and Coherence constraint in LFG all predict that complements belong to Core Syntax where only lexically specified information is realized. These principles do not rule out the possibility of having lexically specified information realized out of the Core Syntax, but crucially, it predicts that every element in Core Syntax has to be lexically required, as represented in Figure 1.

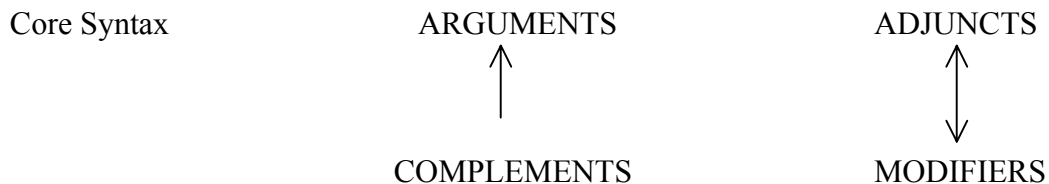


Figure 1

Arguments are participants required by every instance of the event described by the main verb that are, in addition, relevant for the differentiation of the main verb to other verbs in the lexicon (Paradigm Principle, Paris 2001) and/or the differentiation of the verb class to which the main verb belongs ('class specificity' Koenig, Maunier and Benveniste (in press)). Information about Time, Space or Manner is typically irrelevant to that respect since these notions describe properties that belong to every event. It is not the Manner what differentiates the verb *entrar* 'enter' from the verb *salir* 'exit'; however, if Manner of Motion is expressed by a GP as in sentence (1) (i.e. *entrar corriendo* 'enter running'), this GP has a complement status.

I have argued in chapter IV and this chapter that the meaning associated with SGC_C contains in every case a mereological relation of some sort. That is, a whole-part

relation is necessarily present in the meaning of SGC_C . In this context, the appropriate interface generalization is expressed in (41) that should replace the one in Figure 1.

(41) Complement \longrightarrow Mereological Relation

This means that every verb complement (of any syntactic category (e.g. VP, NP, S)) hold a part-whole relation with the event described by the main verb. For the case of relations between events, the interface principle predicts that the gerund phrase could be a syntactic complement to the main verb since it expresses an event that is in a part-whole relation with the main verb.

7. FINAL THOUGHTS ON MEANS AND ITS RELATION TO SGC_C

This chapter has characterized the semantics of $SGC_{C-MEANS}$ in terms of the relation of Means, which has been defined in terms of two constraints: Partial Identity and Asymmetry. In turn, Partial Identity requires the satisfaction of the following conditions: event overlapping, sharing of a distinctive relation and an incremental relation between the events.

There are a number of intuitive properties that are consistent with our technical characterization of Means. First, the idea that Manner –which we characterized in the previous chapter in terms of CiS- is a weaker notion than Means but that they are semantically related in the sense that latter includes the former one. In our description it is presupposed that any event that satisfies Means satisfies also CiS; in other words, Manner is a cover term that includes both CiS and Means.

Also, there is the idea that Manner and Means are internal relations; that is, Manner is always a relation between two entities and the output is also the same entity.

That is, Manner is always a relation in the there is ‘x that is the Manner of y’ and the output is always some kind of y, the same set or same sort of individual. This is true for Manner Proper as well as for Means as defined above.

There is the intuition that Means is a relation between entities in the same ‘causal chain’. In contrast to Manner, Means involves the idea that the element y, which is said to be the Means of x, is involved in the coming about of y. The first way in which the definitions above reflects this intuition is by characterizing Means as an event overlapping relation whereas Manner involves only interval overlapping. This relation allows us to capture the fact that the gerund event is among the events in the chain that brought about the main event whereas at the same time does not impose a causal relation between them.

This chapter has also identified different subtypes of the Tight Spanish Gerund Construction and set them in a ‘is an instance of’ relation. SGC_C satisfies the constraints on Manner (i.e. Circumstance Sharing); $SGC_{C-MEANS}$ is semantically richer since it the constraints related to Means, which subsumes those of CiS. Further, $SGC_{C-CAUSE}$ is an instance of $SGC_{C-MEANS}$ that also adds further specifications about the relation between the two events –it needs to be causative- and about the parts that are shared between them.

CHAPTER VI

THE SEMANTICS OF SGC_A

This chapter argues that SGC_A has a vague meaning that cover a broad range of interpretations consisting of a set of implicatures such as ‘consequence’ or ‘motivation’. The vague meaning of SGC_A is characterized in terms of the conjunction of two constraints: temporal contiguity and event contiguity.

1. INTRODUCTION

There are three kinds of properties that justify the distinction between SGC_C and SGC_A. There are structural reasons that support the distinction, as discussed in detail in the chapter II. In addition, there are clear differences in the information structure configurations that characterize each construction; this distinction will be made clear in chapter VIII. Finally, there are semantic differences between SGC_A and SGC_C, which are the focus of this chapter.

The Spanish Gerund Construction encodes a relation between the main and gerund events and this is also true for SGC_A. Unlike Adverbial Clauses, this relation is not lexically determined by the head of the adverbial clause and, further, unlike lexically determined control structures, the relation is not defined either by the lexical content of the main verb. I have shown that SGC_C involves either ‘circumstance sharing’ or ‘event overlapping’ between the main and the gerund event. Thus, the presence of constant semantic categories has been shown to hold for SGC_C; however, what about SGC_A?

The difference in the syntactic structures of SGC_C and SGC_A suggests that their semantics might also differ. That is, the syntax of SGC_A has the main and the embedded clauses loosely related as indicated, for instance, by the fact that those clauses in SGC_A are typically separated by a pause. In contrast, no pause can separate the gerund phrase from the main clause in SGC_C . The looser syntax of SGC_A is consistent with its semantics in the sense that it is more variable than that of SGC_C and denotes event external relations.

König 1995 summarizes the different analyses of constructions similar to SGC_A in other languages. Two competing proposals have been made with respect to the meaning of SGC_A ; either the semantics of the construction is ‘vague’ (i.e. underspecified) or the construction is polysemous.

Stump (1985) advocates vagueness since he proposes that the meaning of the Absolute Construction in English is a relation between two temporal abstracts; briefly put, it is associated with a temporal constraint. In contrast, polysemy in SGC_A entails that the construction is associated with different meanings that cannot be reduced to each other or to more abstract meanings.

As König 1995 points out, the polysemous view is the easy way to take since it avoids the work of finding a commonality between all the possible meanings. The close similarity between the interpretations suggests that a polysemous analysis might not be needed, but vagueness analyses have suffered from two defects. First, the meaning that is proposed is so vague as to be uninformative; second, they allow any kind of relation between events; but this is not true of SGC_A . Thus, the proposed vague description needs to be incompatible with the relations that cannot be expressed in SGC_A .

In the next section I explore a vagueness description of SGC_A that tries to avoid the mistakes mentioned above.

2. A SEMANTIC ANALYSIS OF SGC_A

2.1. THE INFERENTIAL STATUS OF THE ‘CONSEQUENCE’ RELATION

Example (1) presents two events in a sequence such that one is the ‘consequence’ of the other; the gerund event e_G is the effect of the main clause event e_M . This entails that the causing event –i.e. the leaving or e_M – needs to temporally precedes the effect event –i.e. the abandoning or e_G . Furthermore, it is presupposed that if e_M would not have taken place, e_G might not have taken place either; namely, the leaving event has the abandoning event as a consequence. It does assert that e_G took place because e_M took place previously.

(1) Algunos diputados se escindieron del bloque, abandonando a sus viejos compañeros.
Some representatives REF separated from-the party, abandoning to their old comrades
.. ‘Some of the representatives left the party thereby abandoning their old comrades’

The notion of ‘consequence’ involves a strong dependency between two events such that e_M is a sufficient condition for e_G ; that is, the occurrence of e_M leads necessarily to e_G such that leaving event caused the abandoning event.

It is important for our purposes to notice that in (1) the relation of consequence is external to the two events. The two events that are connected by a relation that is external to e_M and e_G and that composes a third event that contains the former two as subparts. The relation is ‘external’ because it does not target –i.e. it does not have as arguments– subparts of those events, it rather takes them as wholes. Thus, (1) can be described as the constitution of a complex event out of two events and an external relation between them.

There is no necessary conceptual difference in the relation of ‘consequence’ as expressed in (1) and a ‘causal’ relation. However, I have used these terms differently. The event relations that I have labeled as ‘causal’ in the preceding chapter involve internal causal relations. They are all constituted by causative verbs heading main clauses and the connections between the gerund and the main events involve subparts of these events: the gerund event is identified with one of the main event’s subevents –the causing event. In contrast, the relation of ‘consequence’ does not involve internal parts of e_M and e_G . The notion of ‘cause’ in SGC_C typically requires a whole-part relation between its arguments, whereas in the case of the ‘consequence’, the final part of the main event is connected by the relation of adjacency as expressed below, the events are not required to overlap.

$$(2) \quad e_M \propto_E e_G$$

As defined in Krifka (1998), the relation of adjacency basically says that two adjacent events are contiguous events in a Path such that any event between them is either part of e_M or e_G and, further, that these events do not overlap (but they might have overlapping subevents).

There are further constructional distinctions between external causality or ‘consequence’ and internal causality or just ‘cause’. Lexicalized causal relations present a change of state that is conceived as an effect; namely, they are necessarily dependent event. The verb *kill* involves a change of state (from being alive to being death) that is conceived as necessarily caused by some other event. In contrast, the consequence relation takes two events that are independent; thus, this relation is not limited to relate states (or change of states) but it can relate any type of event.

The consequence relation imposes temporal requirements. First, the causing event needs to temporally precede the effect. Second, the precedence needs to be immediate, which can be expressed by the relation of temporal contiguity; thus, we can say the interval t_M must precede and be contiguous to t_G . The restrictions associated with the concept of ‘consequence’ can be summed up as follows.

- (3) ‘i’ The events e_1 and e_2 took place;
- ‘ii’ t_{e1} precedes and it is contiguous to t_{e2} ;
- ‘iii’ e_1 is a sufficient condition for an event e_2 to take place.

The interpretation of sentence (1) changes if the gerund clause is preposed, as in sentence (4).

- (4) Abandonando a sus viejos compañeros, algunos diputados se escindieron del bloque.
 Abandoning to their old comrades, some of the representatives left from-the party
 ‘Abandoning their old comrades, some of the representatives left the party’

Now the interpretation is that the gerund event is the causing event whereas the main event is the effect. This change of interpretation mirrors the change in the linear order of the two clauses. Iconically, then, the event described first has precedence over the other event and, thus, is seen as the cause of the event described in the second clause. This means that the gerund clause can function as the effect or the cause in SGC_A depending on its position relative to the main clause; in addition, the relative position of the clauses mirrors their temporal interpretation.

This change of interpretation based on an iconic effect indicates that the relation of consequence is not necessarily encoded in the construction but it is rather the result of an inference; in other words, the ‘consequence’ relation is an implicature and that is why I have been using the category of ‘interpretation’ as opposed to ‘meaning’ to refer to (1).

Perfective markers can also affect the interpretation of SGC_A . The verb in the gerund clause can be in the Perfect form altering substantially the meaning of the sentences. Sentence (5) does not implicate that the gerund event is the effect anymore since e_G is set to have occurred before e_M .

(5) Algunos diputados se escindieron del bloque, habiendo abandonando a sus compañeros.

Some representatives REF separated from-the party, abandoning to their comrades
 ‘Having abandoned their comrades, some of the representatives left the party’

Sentence (4) is marginal and for those speakers that accept it, it now carries the same implicature as (3); the effect corresponds now to the main event and the causing event is now the gerund event.

Finally, a Perfect form of the gerund in (3) would only stress the ‘consequence’ connection by emphasizing the fact that e_G precedes e_M . This is shown in (6) below.

(6) Habiendo abandonado a sus viejos compañeros, algunos diputados se escindieron del bloque.
 having abandoned to their old comrades, some of the representatives left from-the party
 ‘Having abandoned their old comrades, some of the representatives left the party’

Another piece of evidence for not presenting ‘consequence’ as encoded but merely implicated comes from the comparison of the consequence interpretation with the lexically encoded causal meaning. Sentence (7) below also implicates a consequence relation between the two clauses. It is particularly interesting because without a pause sentence (7) would be an example of the subtype $SGC_{C-CAUSE}$ of SGC_C ; in the reading associated with $SGC_{C-CAUSE}$ the gerund would express the causing event whereas in (7) it introduces the effect.

(7) El líder paralizó el proceso de paz, activando la guerrilla.
 The leader stopped the process of peace activating the guerrilla

‘The leader activated the guerrilla by stopping the peace process’

The pause between the clauses in (7) induces a change in the underlying syntactic structure and the semantic connection between the events. The causal relation in the SGC_C version was introduced by the meaning of the main verb. To the contrary, this lexically encoded relation is irrelevant in (9); the two events are set in a sequence mediated by a causal relation where e_M is the cause and e_G the effect.

2.1. THE ROLE OF INTONATION

Preposed gerundial clauses partake of two different structures. These two different underlying structures correspond to different intonation patterns. First, the gerund clause can be emphatically stressed and not be followed by a pause; this sentence exemplifies SGC_{C-CAUSE}.

- (8) ACTIVANDO LA GUERRILLA el líder paralizó el proceso de paz, .
activating the guerrilla the leader stopped the process of peace
‘The leader activated the guerrilla by stopping the peace process’

Second, there can be a pause between the clauses and no emphatic stress on the gerund clause as illustrated in (9); such sentence exemplifies SGC_A and the interpretation would most likely be ‘consequence’.

- (9) Activando la guerrilla, el líder paralizó el proceso de paz, .
activating the guerrilla the leader stopped the process of peace
‘The leader activated the guerrilla by stopping the peace process’

2.3. OTHER KINDS OF INFERENCES ASSOCIATED WITH SGC_A

Example (10) below makes also a case for the ‘implicature’ status of the consequence relation in SGC_A. It relates a state VP and the passive form of an activity verb. It is

semantically ambiguous a ‘reason/motivation’ relation and a mere temporal relation between the two events.

(10) Los veteranos fueron los heroes de la jornada, siendo agasajados por todo el pueblo.

the veterans were the heroes of the day, being honored by the whole town

‘The veterans were the heroes of the day, being honored by the whole town’

In the temporal reading the two eventualities are temporally contiguous; the relation may be nevertheless stronger since the main event could be the motivation of the gerund event. It is crucial, though, that in both cases there is a connection between the eventualities such that they share the same circumstance.

I have characterized (10) in terms of a ‘reason’ implicature. ‘Reason’ is akin to ‘consequence’ in that it takes an event to be a sufficient condition for the other; they differ in that I reserve the notion of ‘consequence’ for causal relations in the physical world, which requires events of the same ontological type and a sequence relation. In contrast, ‘reason’ or ‘motivation’ is taken to be psychological causation.

A further argument against assuming that ‘consequence’ is grammatically encoded in SGC_A comes from the fact that adding lexical material to (1) stressing the temporal connection –for example, with the adverb *luego* ‘later’- makes the ‘consequence’ connection less salient. The speaker does not then assert that the abandoning event was a consequence of the leaving event, s/he merely affirms that it happened later than the leaving but in the same circumstance (contiguous time intervals). ‘Consequence’ might be added by a specific context but is not introduced by the form itself nor is necessarily implied. That is, the temporal adverb triggers a reading that I call ‘illative’ -following the

term used in Fernández Lagunilla 1999- which basically means that the events are contiguous to each other.

The same effect ensures if the temporal adverb is added to the preposed gerund clause in (4), but it should be kept in mind that the adverb *luego* shift the original precedence interpretation of the sentence.

(11) Abandonando luego a sus viejos compañeros, algunos diputados se escindieron del bloque.

Abandoning later to their old comrades, some of the representatives left from-the party
 ‘Later abandoning their old comrades, some of the representatives left the party’

We thus see that the construction does not prevent us from adding an adverbial element that alters the ‘consequence’ relation. Further, if the adverb were consistent with the original temporal sequence –such as, for example, the adverb *primero* first- the ‘consequence’ reading could be still maintained.

The fact that the ‘consequence’ relation in SGC_A is highly sensitive to the linguistic context confirms that this relation must be considered not encoded in the construction. The meaning of SGC_A is vague regarding a finite set of possible interpretations but must involve a relation between two events whose temporal traces are ‘adjacent’, that is, a precedence relation that might involve overlap of subparts (Krifka 1998).

(12) $t_G \propto t_M$

Beyond this temporal constraint on the relation between the two events does not seem to be any stronger statement that can be cover all the subtypes of the construction.

3. SGC_A WITH EXPLICIT CONJUNCTION

The two clauses in SGC_A can sometimes be joined by a conjunction with semantic value. This is the case of sentence (13).

- (13) Hizo de la política un apostolado, incluso combinándola con la medicina.
made-3ps of the politics a apostolate, even combining-it-ACC with the medicine
'He made of politics an apostolate, further mixing it with medical science'

The conjunction *incluso* 'even' indicates that both events took place. It basically adds a second event to the main event. Interestingly enough, the two events need not be sequential; in fact, sentence (13) means that the two events took place at overlapping intervals. Does this mean that the temporal constraint in (12) does not hold for every SGC_A? Not necessarily; it seems more plausible to assume that a lexical item (i.e. the conjunction) can coerce the temporal constraint associated with the construction (just as adverbs can coerce the meaning of tense markers (among others, cf. De Swart 1998)).

SGC_A also allows a conjunction with 'concessive' meaning such that the gerund event is introduced as an unexpected co-occurrence. This is the case of the conjunction *aun* 'even if'.

- (14) Aun recitándole una poesía, Laurita no logró el perdón de su padre.
even reciting a poem, Laurita not got the pardon of her father
'Not even reciting a poem for him, Laurita got her father's forgiveness'

Aun introduces the cancellation of an implicature in the sense that the event introduced by the gerund was somehow supposed to have the main event as consequence (others conjunctions that can introduce the gerund clause such as *ni siquiera* 'not even' for example).

These examples above further show the broad range of variability in the interpretations that are allowed in SGC_A.

4. THE “TEMPORAL” SGC_A

Sentence (15) instantiates a different kind of relation between the main and gerund events; the gerund event precedes the main event (Fernandez Lagunilla 1999). However, the gerund clause gives more information than merely providing the time immediately preceding the interval at which the main event took place.

- (15) Llegando la noche, María nos llamó.
Arriving the night, María us-ACC called
‘At nightfall María called us’

Sentence (15) asserts a sort of ‘motivation’ relation between the two events (because nightfall took place, she called us). For example, (15) would not be a felicitous answer to a question such as *¿Cuándo llamó María?* ‘When did María call?’.

In (15) we can say that the gerund clause presents the ‘motivation’ of the Actor for performing the main event to perform it. ‘Motivation’ can be seen –as I have argued earlier- as counterpart of the ‘consequence’ relation in a psychological causal chain. If the subject of the gerund clause is substituted by a person (i.e. *Pedro*), the interpretation of the relation as ‘motivation’ becomes even more apparent.

- (16) Llegando Pedro, María nos llamó.
Arriving Pedro, María us-ACC called
‘María called us when Pedro arrived’

The relation of ‘motivation’ or ‘weak consequence’ reading is also implicated; the speaker implies that the completion of the gerund event motivated or made possible the main event. The nature of this ‘motivation’ is very vague, but in any case (16) is not just a temporal sequence relation as in (17).

- (17) María nos llamó cuando llegó Pedro.
María us called when arrived Pedro

‘María called us when/once Pedro called’

The embedded event gives the circumstance or temporal location of the main event.

5. THE CONDITIONAL SGC_A

Sentences like (18) represents yet a different interpretation of SGC_A that involves a Conditional relation between the clauses.

- (18) Teniendo en cuenta la inflación del año, el negocio resultó un éxito.
taking in account the costs, the business resulted a success
‘Taking into account the costs, the business was successful’

The gerund clause can have the following paraphrase: ‘if the costs are taken into account’ and seems to lead to the introduction of a conditional context. The conditional relation in (18) actually involves a cognitive event (i.e. taking into account) that determines –is a condition of - an ‘evaluation’ (the speaker’s judgment ‘the business was a success’) rather than the success itself. All the examples I have found which involve conditional relations describe either directly or covertly -like the sentence above- a relation between two mental events. Another example is given in (19).

- (19) Sabiendo que estoy rodeado de amigos, me siento muy bien.
knowing that am-I surrounded of friends, REF feels-I very well
‘I feel great knowing that I am surrounded by friends’

This example is ambiguous between a conditional and a consequence reading. A mental state can be the consequence of another mental state (the feeling is the consequence of the knowledge); on the other hand, if the relation is the present tense is interpreted –as it usually is- generically, then the sentence describes a condition that can be paraphrased: if I know that people is around, I feel well.

The conditional reading of SGC_A can be related to its consequence reading plus certain requirements on either the ontology of predicates involved – they must describe directly or indirectly mental events) or an irrealis interpretation of the main event. In contrast, I propose that the conditional reading is a more general interpretation than consequence. Condition would then be seen as a relation between two events such that event e_1 needs to take place for e_2 to take place; it is just an asymmetric co-occurrence relation and consequence is then interpreted as a stronger relation in that it adds ‘causal power’ to the condition relation e_1 and e_2 .

6. THE ILLATIVE SGC_A

There is a subtype of SGC_A that presents two events in a sequence and that we can call ‘illative’ following Fernández Lagunilla 1999. In sentence (20) the condemnation is followed by the denying event; the sentence says that the Actor performed two activities in a row, s/he first condemned somebody and, then, s/he denied this somebody parole. Sentence (20) can be paraphrased by connecting the two clauses with the conjunction ‘also’. However, more seems to be involved. The two events are closely related in the sense that they are performed under the same circumstance and belong to the same ontological class (they are both verbal events), they are presented as events that are parts of a series of events.

- (20) ‘...los había condenado a seis años de prisión, denegándoles la excarcelación...’
 them had-IMP condemned to six years of prison, denying-them the parole
 ‘...he had condemned them to six years in prison, denying them parole...’

Because the meaning of the main event and gerund event belongs to the same semantic class and are performed by the same Actor in the same circumstance, the addition of this

information to the meaning of SGC_A implies that e_G and e_M are events in the causal chain of a larger event.

Another clear example of the illative class is given by the sentence (21).

(21) Necrológica en *El País*, from Fernández Lagunilla 1999

A los diez años volvió con su familia a Galicia, regresando a Estados Unidos durante la Guerra
to the ten years returned with her/his family to Galicia, returning to United States during the War
civil Española.
civil Spanish
'S/he returned to Galicia with her/his family, and came back to the United States during the Spanish Civil War'

The two events are part of a temporal sequence. However, this is not either a mere temporal sequence since the two events are performed by the same Actor, under the same or contiguous circumstances –contiguous temporal traces and spaced- and the two events belong to the same semantic class and ontological category (i.e. they are translational motion events) such that for one event to happen (the coming back from Spain), the other needs to have happen before (the going to Spain). Thus, what seems to be a simple sequence or addition relation determined by the meaning of SGC_A turns into a stronger event relation due to the context (which is linguistics in this case, namely the meaning of the related verbs). Hence, we can keep the label 'illative' with the proviso that it does not mean just temporal addition (against the traditional interpretation in, for example, Fernandez Lagunilla 1999).

In general, each interpretation of SGC_A adds a richer component to a mere temporal interpretation that I have argued is part of its meaning. This fact can be captured by saying that there is a constraint as part of the meaning of SGC_A that requires a semantic relation between the e_G and e_M that is going to be decided by context.

Yet another way of capturing the meaning of SGC_A would be to say that it contains beside temporal adjacency another constraint requiring event adjacency. Namely, I propose to require the events expressed in SGC_A to be contiguous in the same ‘path’ (or causal chain) without further specifying the nature of the relation between the events, which is done pragmatically by implicatures. This is the option that seem to be more accurate and more consistent with the methodology adopted in this investigation in the sense of applying mereological relations between events for the description of meaning. Event contiguity has been already presented in two.

7. SOME CONSEQUENCES OF OUR DESCRIPTION OF SGC_A

The first question that the description of SGC_A I just presented raises is whether I exhausted the possible interpretations of the construction or, in fact, SGC_A is associated with an open class of interpretation from which only the most relevant or discernible ones were selected. There is a sense in which both alternatives can be correct; that is, the list of interpretations I presented exhausts the possible semantic classes of relations but these relations can be further specified in a number of different ways depending on the particular properties of the verbs and, hence, the events being related.

The strongest claim we can make is that SGC_A is associated with an underspecified semantic constraint (a ‘vague’ meaning) constituted by two general conditions. The first one is event contiguity and the second one temporal contiguity; these two conditions are required to be satisfied by the relation between the gerund and the main events. Event contiguity denotes an abstract relation that encompasses more specific ones as the ones characterized earlier as ‘consequence’, ‘motivation’, ‘reason’ and

‘condition’ and that derives from the interplay between the constraints associated with consequences and the ontological properties of the specific events involved.

Event contiguity is an asymmetric co-occurrence relation such that there is one event that takes place in a path and that is followed by a contiguous event. For example, this constraint is weaker than a condition relation but it allows it; namely, from contiguity one could add that the preceding event is a necessary condition for the following one. The condition does not need to be an entailment of the appropriate clause in which case it would be based on the intrinsic properties of the event class. In addition, the time intervals of these events need to be in a mereological relation (it could be overlapping, contiguity, proper part).

‘Motivation’ as in for example (18) or (19) is consistent with event contiguity; in these examples the speaker asserts that the arrival was a necessary condition for the calling event. The speaker is presupposing a counterfactual statement of the following form: ‘if Pedro did not arrive, María would not have called us’. One way to understand this is by saying that human actors typically behave under psychological motivations – cognitive or emotional or moral- and this sentence expresses that the arrival was one of those sorts of motivations for María.

There is ‘causal power’ in examples (1) through (8) that were labeled ‘consequence’; in this case, the determining event is thought to have ‘causal power’ over the effect such that it is interpreted as a sufficient condition. The same can be said for the particular example (19), the sole knowledge of being around friends is asserted to be a sufficient condition for the well being of the participant; this relation was call ‘reason’

rather than ‘consequence’ simply because it involves mental states rather than physical events.

In example (10) the state of being heroes is asserted to be a sufficient condition for the honoring event; in this case also the notion of consequence seems inappropriate because honoring is ontologically a social event and, in consequence, the causal chain is mediated by mental values and representations. It seems more appropriate, thus, to talk about ‘motivations’. I should stress, however, that the underlying relation is still that of ‘sufficient condition’, which is stronger but consistent than circumstantial condition.

The illative class seems to satisfy the constraints required by circumstantial condition and temporal contiguity without necessarily adding any other meaning; in a way, ‘illative’ might constitute an example of the supertype. This is shown in the example (20) above. Notice that this sentence implies a temporal contiguity relation between the two events; that is, the going to Galicia ends up in a state (the state of being at Galicia) that lasts up to the return to the State.²⁶

The lexical SGC_A –namely, the one in which the relation is introduced by an overt element like the conjunction *aun* ‘even if’- is associated with ‘concessive’ relations. Concessive relations can be interpreted as opposed to a conditional relation (König 1995) in that they presuppose that the event described by the clause introduced by the conjunction should have been a sufficient condition for the other event. The concessive conjunction is introduced to cancel out that conditional relation; hence, it presupposes

²⁶ It is possible to add lexical material to this illative sentence and asserts that the gerund event does not immediately follow the main event. Thus, we can add *luego de pasear por Italia* ‘after visiting Italy’; hence, the returning to the US. does not immediately followed the coming to Spain. However, we can still characterize the temporal relation in the illative type as ‘temporal contiguity’ since this is so unless there is

that conditional relation; therefore, it is consistent with our characterization of SGC_A in terms of generic condition.

A different issue raised by my description of SGC_A is to what extent it precludes the presence of interpretative mechanisms of the sort used in text interpretation such as bridging inferences or abduction (Simpson 1994, Hobbes 1995). The difference between these inferential processes and our description of SGC lies in the fact that the meaning of SGC_A is grammatically encoded. There is an ample range of variety but not any semantic relation is possible; thus, there is a form (i.e. SGC_A) that is associated with a restricted set of semantic relations. The inferences in a text need not be -and usually are not- grammatically constrained to a specific set of relations; only the meaning of the verbs and the context determine the (set of) inferences that are more suitable to turn a group of sentences into coherent text. For example, sentences in (22) could be part of a text.

- (22) Belle fue a buscar el Malbec. Los invitados la esperaban ansiosos.
Belle went to look for the Malbec. The guests were waiting-IMP anxious
Belle left to look for the Malbec. The guests were waiting for her anxiously.

This is a perfectly understandable piece of text. It makes sense immediately to the reader. That is, the two events are clearly related but most of the information that allows us to relate them is implicit and, thus, it seems plausible to think that abduction is the process by which we unveil the relation. In contrast, these two events cannot be expressed in SGC_A , which shows that not every relation can be expressed by SGC_A .

explicit material that inserts an intermediate event and, still in this case, the gerund event would be contiguous to this intermediate event.

- (23) #Esperando los invitados ansiosos, Belle fue a buscar el Malbec.
waiting the guests anxious, Belle went to look for the Malbec
'The guess waiting anxiously, Belle left to look for the Malbec'

Abduction and bridging inferences are inferential processes that draw inferences out of premises and context with logical rules; to the contrary, the interpretation in SGC_A the implicit information is grammatically –i.e. conventionally (arbitrarily)- restricted to a finite set of relations. The difference is not only a matter of the restricted or unrestricted number of inferences. It seems to me that the difference lies in the nature of the process of drawing implicit information. The information in SGC_A is implicit but it can range over a finite set of possible interpretations. The definition of this set is given by constraints that are encoded in the construction. In the case of text inferences, the information is also 'implicit' but here it refers to information that is not grammatically encoded and, hence, there is no overt element that indicates it.²⁷

The construction is associated with a conventional meaning. Speakers do not need to 'infer' this information since it is encoded. Still, we need to decide which of the possible meaning encoded in this (ambiguous) construction is the appropriate given the linguistic and extralinguistic context. Only at this level abductive inferences might be possible, but this is not an issue that can be explored in this work; for us, it is enough to stay that there is a abstract piece of meaning that is actually encoded in the construction.

²⁷ I do not see any evidence against the fact that, within the interpretations that are grammatically allowed, we may use a sort of 'abduction' process to determine the right interpretation. I will not explore this possibility here.

CHAPTER VII

THE TEMPORAL INTERPRETATION OF SGC

This chapter presents a description of the aspectual and temporal interpretation of SGC. I address first the temporal location in SGC, namely, the relation of the event intervals associated with the main and the gerund events in relation to Speech Time. There are two ways of thinking about this relation; it can be thought of, first, as determined by the semantic relation between the events or, second, as one of the constraints that need to be satisfied by a subtype of SGC.

The analysis presented in this chapter emphasizes the role of the semantic relation between the events in determining the temporal interpretation of SGC sentences. I further show that the gerund form is associated with a temporal structure that is modified for some instances of SGC_A as a consequence of the semantic relation between the main and gerund events.

I argue that the basic temporal structure (BTS) associated with the gerund form is that of temporal overlap. This relation is compatible with the semantics of SGC_C but it is incompatible with that of SGC_A. I propose that SGC_C maintains the BTS of the gerund whereas SGC_A coerces with respect to the specific semantic demands of its subtypes. Ultimately, the alteration of the BTS of the gerund in SGC_A is allowed by the syntax of the construction; the BTS of the gerund can only be coerced in a syntactic domain where the gerund form is the head of an independent clause (SGC_A).

2. TEMPORAL LOCATION

The temporal interpretation of the meaning of a sentence consists of the interaction of different parameters: situation aspect, viewpoint aspect and temporal location (cf. *inter alia* Smith 1997). These are three independent dimensions in which Time is encoded in languages and each of them contributes temporal properties that interact and determine the full temporal interpretation of an event description. Situation aspect refers to the different patterns of distribution of event subparts in a time interval; these different patterns are characterized by categories such as State (i.e. homogeneous distribution) and Event (non-homogeneous distribution) and, within the latter, we can identify Activities (i.e. non-telic events) and Accomplishments (i.e. telic events) (Dowty 1979, VanValing and LaPolla 1997). Each of these categories is determined by the combined contribution of the semantic of the verbs and its arguments representation (Verkuyl 1972, 1993). Viewpoint aspect refers to the categories Perfective and Imperfective that determine, to simplify, that an event is presented in a sentence with its temporal endpoints (namely, beginning and end) or not. Finally, temporal location is yet another independent factor that defines the position of an event in the temporal line in relation to Speech Time.

For this investigation I will adopt a version of the Tense system in relation to temporal location developed in Reichenbach (1947). It seems natural within this system to understand Time as a (ordered and convex) set of interval. Tenses are relations among intervals that are defined in relation to Speech Time (the interval associated with moment at which the sentence is uttered); this is a deictic category that denote the moment of Speech and that acts as the center of the Tense system. Reichenbach's proposal is that

every Tense in a language can be described in terms of precedence relations between three intervals: Speech time (t^*), Reference Time (t_R) and Event Time (t_E). More precisely, each Tense is defined as the conjunction of precedence relations between t^* and t_R and between t_R and t_E ; the relation between t_E and t^* is left underspecified. Each Tense is described below following these guidelines (Hornstein 1990).

- (1) a. Present: $(t^* \otimes t_R) \wedge (t_R \otimes t_E)$
- b. Past: $(t_R \otimes t_E) \wedge (t_R < t^*)$
- c. Future: $(t^* < t_R) \wedge (t_R \otimes t_E)$
- d. Present Perfect: $(t_R < t_E) \wedge (t^* \otimes t_R)$
- e. Past Perfect $(t_R < t^*) \wedge (t_E < t_R)$
- f. Future Perfect $(t^* < t_R) \wedge (t_E < t_R)$

In addition, Tense morphemes carry specifications about the viewpoint aspect. For example, in addition to the information about the temporal location as specified above, the Preterit morpheme in Spanish is characterized by the Perfective aspectual viewpoint, which means that the Preterit is associated with intervals with visible (i.e. specified) endpoints.

For our purposes here the central question is how to characterize the temporal interpretation of non-tensed clauses such as gerund clauses; they do have a temporal interpretation but not necessarily in the same sense that finite clauses have. Let's assume that the property of non-finite forms is that they do not specify the orientation of event time t_E in relation to Speech Time t^* (Hornstein 1990). Still, gerund clauses are temporally located in SGC_C , as illustrated by sentence (2) and we need to explain how this information comes about.

- (2) '...quienes murieron ...cumpliendo con su deber...' (Oral, Argentina, Real Academia)
 who died fulfilling with their duty
 '...those who died fulfilling their duty...'

The event description in the main clause is modified by the Preterit; the event e_M is associated with a temporal interval t_M that overlaps with $t_{R(M)}$ and, in addition, t^* precedes t_R in accordance with (1b). It says also that t_M is an interval that includes endpoints. Since the dying event is a telic eventuality (i.e. an accomplishment), the Perfective aspect determines that the event was completed. The gerund event e_G is also a telic verb (accomplishment) associated with the interval t_G . The interpretation of (2) determines that the fulfilling event overlaps the dying event; hence, t_G overlaps t_M and $t_{R(M)}$. Let's assume, then, that the gerund's meaning involves a temporal condition that determines the following basic temporal structure (BTS).

$$(4) \quad t_G \otimes t_{R(G)}$$

This means that the gerund morphology comes specified for a temporal interpretation where the reference time and the event time overlap. The Reference Time t_R has an anaphoric nature (cf. Partee 1984), it looks for an 'antecedent'. Hornstein (1990) claims that $t_{R(G)}$ takes the value of the Reference Time of the main event in English; however, I argue that this is not true for the Spanish gerunds in SGC nor for the English gerund either (since there are cases where they overlap). Let's look at the temporal interpretation of the sentence (4).

- (4) El maestro ha entrado a la sala sonriendo.
 the teacher has entered to the classroom smiling
 'The teacher entered the classroom smiling'

Since the t_R of the perfect overlaps Speech Time, Hornstein theory predicts that the teacher is still smiling at Speech Time. This is not necessarily true; let's assume that (4) is uttered by a student that is in that classroom with us; the teacher came into that classroom half an hour ago. That sentence would be true even if the teacher is not smiling

now; the only condition imposed by (4) is that the teacher was smiling while entering. Hence, the temporal structure that characterizes the SGC determines that the gerund event's Reference Time overlaps the Event Time of the tense in the main clause, as shown in (5).

$$(5) \quad t_G \otimes t_{R(G)} \wedge t_{R(G)} \otimes t_M$$

In brief, I propose that the Reference Time of the gerund (or $t_{R(G)}$) in SGC 'looks for' the event time interval of the main event to overlap with it. Since the temporal structure of the gerund determines that t_G and $t_{R(G)}$ overlap, then t_G and t_M overlap by transitivity. Notice that $t_{R(G)}$ must be identified with the value of t_M ; $t_{R(G)}$ and t_M cannot be in an overlapping relation because this could mean that the t_G overlap with a portion of $t_{R(G)}$ that is different from the portion that overlaps with t_M and, hence, t_M would not necessarily overlap with t_G .

This is also true for $SGC_{C-MEANS}$ in the sense that $t_{R(G)}$ takes the Event Time of the main event as its value rather than the main event Reference Time.

- (6) El estudiante ha llegado caminando.
 The student has arrived walking
 'The student has arrived walking'

The Reference Time of the Present Perfect tense overlaps Speech Time, and hence, if $t_{R(G)}$ is identical with $t_{R(M)}$ sentence (6) would entail that the event of walking is still going on at Speech Time, but this is not the case. This sentence entails that the walking event was going on while they were arriving, which in this sentence took place before Speech Time, and it does not specify what happened later with the gerund event (the student might or might not have kept on walking). One must conclude that (5) is the right characterization of the temporal structure in SGC.

In addition, example (7) can be used to illustrate the fact that the perfective aspect of the main event description does not determine the interpretation of the gerund event.

- (7) Juan viajó a Roma leyendo el Aleph.
 Juan traveled to Rome reading the Aleph
 ‘Juan read the Aleph while travelling to Rome’

The main clause is modified by the Preterit so that the main event took place in the Past. Further, the Preterit is a perfective tense, and, hence, it introduces a boundary. This boundary can be semantically defined in terms of a Max operator as shown in (8).

$$(8) \text{Max}(e, \varphi) \leftrightarrow \neg \exists e'' U_E \in [e \subset e'' \wedge \varphi(e'')] \quad (\text{Koenig and Muansuwan 2000})^{28}$$

This means that any event description modified by the Preterite denote the largest event that satisfied the description. The Perfective viewpoint of the main clause does not determine the interpretation of the gerund clause; the gerund event description is not specific about the completion of the event it denotes. The reading-the-book event might be larger than the one involved in the assertion in (8); Juan might have kept reading the book and might not have finish reading the book during the trip. The aspectual properties of the gerund will be described more extensively below, but it is important to note at this point that the aspectual viewpoint of the main clause does not have scope over the gerund phrase.

The characterization of the temporal structure of SGC in terms of (5) predicts the temporal interpretation of gerund clauses in every SGC_C subtype since they require event or circumstance overlapping and, given the homomorphism from the event structure to the temporal structure, this also implies temporal overlapping. However, this description is not necessarily obeyed by some instances of SGC_A as sentence (1) .

- (9) El líder paralizó el proceso de paz, activando la guerrilla.
 The leader stopped the process of peace activating the guerrilla
 ‘The leader activated the guerrilla by stopping the peace process’

The activating event expressed by the gerund clause took place as a consequence of the paralyzing event. In consequence, the two events cannot be associated with overlapping time intervals; their intervals are instead in a contiguous relation in which t_G follows t_M . This means that we have to capture two properties; first, the BTS of the gerund is changed such that t_G does not overlap t_M and, second, still sentence (9) presents the gerund event taking place in the past and, since this information can only come from the main clause tense, we still have to relate the temporal location of the gerund to the main tense while changing its BTS.

One possible description is that, in fact, there is no change in the BTS of the gerund. Instead, I will derive the different temporal interpretation of SGC_C and SGC_A from their different syntax; namely, I will claim that the Reference Time of the gerund and, in general, of non-finite forms can take the value of an event interval t_E if this is available within the same clause. Otherwise, the gerund reference time is not grammatically bounded and, in consequence, the semantic of the relation between the events freely determines the value of it. In consequence, we would predict the temporal interpretation in SGC_A to be variable and, in fact, this is attested by the difference between (9) above and (10) below. Sentence (9) presents the two events in a sequence whereas (10) contains two events taking place at the same time (at least, for some portion of their temporal intervals, which means that they overlap).

- (10) Hizo de la política un apostolado, incluso combinándola con la medicina.

²⁸ As far as I can see, the extensional definition of maximality is enough for the purposes of characterizing Perfectivity in Spanish.

made-3ps of the politics a apostolate, even combining-it-ACC with the medicine
'He made of politics an apostolate, further mixing it with medical science'

The meaning of the conjunction *incluso* 'in addition', plus the coreferential relation between the clitic *la* in direct object position and the NP *la política* 'the politics', ensures that the events takes place at overlapping time intervals. Thus, we can say that the semantic relation of 'addition' determines that the events are interpreted to take place at overlapping intervals.

In contrast, example (11) presents the two events as occurring in a sequence. The interesting property of this example –which is rather frequently used- is that there is no semantic relation between the events beyond the fact that the same participant performs both of them and even this is not a requirement. The interpretation as a sequence rather derives from the perfective aspect of the main verb –which just like at a textual level moves the narrative time ahead- and the temporal adverbial phrases (i.e. *durante la Guerra* 'during the war').

(11)

A los diez años volvió con su familia a Galicia, regresando a Estados Unidos durante la Guerra
to the ten years returned with her/his family to Galicia, returning to United States during the War
civil Española. (Necrológica en *El País*, taken from Fernández Lagunilla 1999)
civil Spanish

Moreover, the semantic vagueness of SGC_A sentence is also reflected as ambiguities in the temporal interpretation, this shows that the latter does not constrain the former one.

(12) Los veteranos fueron los heroes de la jornada, siendo agasajados por todos el pueblo.
the veterans became the heroes of the day, being honored by the whole town
'The veterans became the heroes of the day, being honored by the whole town'

This example is likely interpreted in terms of a ‘consequence’ relation connecting the two events; this interpretation corresponds to the paraphrase that that says that ‘the honors were a consequence of their being heroes’. Still, there is a weaker interpretation available in which the two states just happen to hold at the same time. There is no semantic relation between the two states and, being a state, the main clause does not move the narrative event ahead and, hence, the two events overlap.

Even if the ‘consequence’ relation is the only interpretation available, it is still possible to have some sort of overlapping if the two eventualities being related are states as in the example below.

- (13) Sabiendo que estoy rodeado de amigos, me siento muy bien.
 knowing that am-I surrounded of friends, me feels very well
 ‘I feel great knowing that I am surrounded by friends’

It was said in the previous chapter that this sentence has a ‘consequence’ interpretation; however, since the eventualities are states they are likely to overlap. Hence, the sort of ‘sequence’ intrinsic to the notion of ‘consequence’ does not need to be total in the sense of connecting the final endpoint of one event’s temporal trace with the initial interval of the temporal trace of the other; it allows overlapping as long as there is also a precedence relation of the initial part of the causing event interval precedes the initial part of the interval associated with the effect.

There is a property of the temporal interpretation of SGC_C that has not been addressed yet. It relates to the fact that the temporal intervals overlap; overlap is a symmetric relation. If t_G overlaps t_M , it is also true that t_M overlaps t_G . However, the temporal interpretation of SGC_C is asymmetric since the interval t_M associated with the main event is presented in its entirety (if no aspectual operator determines a different

reading) but this is not the case with the interval associated with the gerund event. Thus, the assertion in sentence (3) takes the whole interval of the dying event as part of the assertion; the sentence is about the entire event of dying and, in consequence, the maximal interval associated with this event is being asserted. In contrast, the only portion of t_G that is relevant in (3) is that portion that overlaps with t_M ; whether e_G holds before or after the period where t_G and t_M overlap.

Notice that the fact that the main clause is perfective –and, hence, describes an event that includes endpoints- makes this asymmetry apparent, but does not cause it. If instead of the Preterit, the Imperfect modifies the main clause (i.e. *moría*) or even the Progressive plus the Imperfect (i.e. *estaba muriendo*), it would still be true that the only relevant part of the gerund trace t_G would be the portion that overlaps with t_M .

The only motivation for the asymmetry described above resides in the information structure that characterizes the sentence. The main clause expresses the presupposed information and gerund clause conveys the FOCUS information. We can call ‘topic time’ or ‘presupposed time’ the interval that defines the portion of time that is relevant for the assertion since the concept we have defined resemble the one elaborated in Klein 2000 for different purposes. Hence, we can say the ‘presupposed interval’ belongs to the event description that introduces the Presupposition.²⁹

There is a cross-constructional linkage pattern between information structure and intervals in complex sentences with overlapping intervals; this pattern determines that the

²⁹ The concept of Topic Time resembles the concept of ‘framing’ in Talmy 2000 as well as ‘evaluation time’ in Musen 2002. All these concepts were proposed in a different context than the one we are dealing with. Thus, for example, the concept of Framing is given in relation to event relations; Musen’s concept plays also a role in the temporal location conveyed by tenses. The concept of Topic Time was supposed to substitute the category of Event Time in a Reichenbachian temporal system and, in this sense, our use of it

interval that is part of the FOCUS is not necessarily part of the assertion in its entirety whereas the interval associated with the presupposition it is. This is shown by ATC sentences also, as can be seen in (14).

- (14) María vendía cuadros cuando vivía en Florencia'
María sold-IMP paintings when lived-IMP in Florence
'María used to sell painting when she lived in Florence'

The assertion in (14) states that the entire period of María's staying in Florence involved selling paintings but María could have also sold paintings before and after staying in Florence. This means that the temporal trace associated with the event in the adverbial clause is entirely included in the assertion whereas the interval associated with the main clause might be only partially involved. This is what we would predict since the when-clause is the presupposition and the main clause the FOCUS in ATC.

2. ASPECTUAL PROPERTIES OF THE GERUND PHRASE

The gerund form is the only non-finite form in Spanish that is intrinsically characterized by an Imperfective viewpoint aspect. This means the gerund event descriptions are associated with event intervals that do not necessarily include their endpoints; that is, these event descriptions present what might be a (non-necessarily proper) part of an event. For example, in sentence (15) the assertion does not include the endpoints of the singing event

- (15) El estudiante ha llegado cantando 'Barrio de tango'.
The student has arrived singing 'Barrio de tango'
'The student has arrived singing 'Barrio de tango''

constitutes a generalization or extension over the original. Since this is not a central point in my investigation I will have to leave a careful analysis of these concepts for further work.

The student might have been singing before and kept on singing after the portion of the singing event that is relevant in this sentence (that portion that overlaps with the arrival). Smith defines the Imperfective viewpoint as the presentation of an interval and its corresponding event without endpoints. Strictly speaking, we should say that those endpoints might not be present but they are not necessarily absent in the case of activities or states.

The effect of the Imperfective is noticeable on telic event descriptions; since telic events contain a final stage that describes a change of state. This final stage needs to be reached in order for the event to be completed. Thus, for example in sentence (6) repeated below.

- (6) Juan viajó a Roma leyendo el Aleph.
Juan traveled to Rome reading the Aleph
'Juan read the Aleph while travelling to Rome'

The event of reading the Aleph is telic, its final stage being the finishing (reading) of the book. Since the final stage is not part of the assertion due to the Imperfective operator in (6), the event description cannot be telic and, hence, the reading of the book becomes an activity. Further, this characterization of the semantics of the gerund form as Imperfective is consistent with the use of the gerund for periphrastic tenses such as the Progressive, which is also intrinsically Imperfective. In fact, the aspectual semantics of gerund clauses can be captured with the same concepts that have been used for the characterization of Imperfectivity in relation to the progressive. That is, it has to be described in terms of 'inertia worlds' (cf. Dowty 1979, Portner 1998) due to its effect on telic event descriptions.

2.1 VARIABILITY IN THE ASPECTUAL INTERPRETATION OF GERUND CLAUSES

Semantic Aspect –in the sense of *Aktionarten*- constitutes a fundamental component in the meaning of SGC since this is an ‘aspectually active’ construction. This property contains two implications: on the one side, the aspectual interpretation of gerund clauses is variable; on the other side, the aspectual type of the base predicate may appear shifted in the gerund clause. Sentence (6) illustrates the alluded type shift. *Leer* ‘read’ is a telic predicate: it combines with quantized arguments such as the definite NP *el Aleph* constituting an eventuality description that is satisfied only by completed eventualities.

Telic event descriptions include a natural boundary signaling the completion of the event e. We would expect a telic reading of the gerund clause in (6) since it contains a telic predicate and a quantized patient. However, this prediction is not confirmed; the event e_G described by the gerund clause in (6) need not be completed. The coordination of (6) with a sentence expressing the completion of the event outside the interval of the gerund event is acceptable.

- (17) Juan voló a Roma leyendo el Aleph y lo terminó aquí mientras me esperaba.
Juan flew to Rome reading the Aleph and it finished here while me-ACC waited-IMP
‘Juan flew to Rome reading the Aleph and he finished it here while waiting for me’

Further, since *for*-adverbial phrases can modify only atelic predicates they are considered a reliable test to check atelic eventuality descriptions; it confirms the atelicity of the gerund description in (6).

- (18) Julita sorprendió a su maestra nadando bajo el agua durante más de un minuto.
Julita surprised to-the teacher swimming under the water during more than one minute
‘Julita surprised her teacher by swimming under water for more than one minute’

Interestingly enough, there are some sentences where the telic event expressed by the gerund clause can be interpreted as completed. This is the case of sentences like the (19) below.

- (19) Ocupando el territorio, el líder paralizó el proceso de paz..
occupying the territory, the leader paralyzed the process of peace
‘The leader paralyzed the peace process by occupying the territory’

It is likely that any reader would understand that the leader did occupy the territory rather than the leader was in the process of occupying it. We need to assume, then, that the semantic relation of consequence coerced the intrinsic imperfective reading of the gerund into a perfective event description that entails the completion of the event.

Interestingly enough, some subtypes of SGC_C may also involve a telic interpretation of the gerund description in opposition to what was said for (6). This is illustrated in (20) where the gerund phrase requires a telic interpretation.

- (20) Juan sorprendió a todos escribiendo una novela.
Juan surprised to everybody writing a novel
‘Juan surprised everybody writing a novel’

e_G is interpreted in this context as a completed event. A piece of evidence that supports the telic reading is that the coordination of (20) with the expression of the completion of e_G outside its interval t_G is not acceptable as shown in (21).

- (21) *y la terminó de escribir a su llegada al país.
and it-FEM of activate to his arrival to-the country
‘and he finished writing it after his arrival to his country’.

The contrast in the aspectual interpretation of the gerund phrases in (6) and (20) needs to be explained.

I claim that the apparent aspectual variability of gerund phrases in SGC stems from the vagueness of the imperfective operator. This operator merely requires a subpart of the reading of the Aleph or of the writing a novel to have occurred. This leaves open three possibilities. The event was completed within the Topic time; or it might have been completed later or it might have been completed only in a possible world. The aspectual behavior of the gerund resembles the *Impfv* operator suggested for Thai in Koenig and Muwanswan 2000 in that it outputs an event that is a non-necessarily proper subpart of the event described by the event description. It differs from it in that GER is not (sub)lexical nor it demands a satisfaction in the ‘inercia’ worlds (it does not require a modal reading).

In sum, GER shifts the type of telic event descriptions and renders them vague regarding telicity. There is still the question of which element determines the telic or atelic reading of gerund descriptions. I argue that this is not done by the gerund morphology itself but rather depends on semantic information provided by the construction of which the gerund is part.

3. EVALUATION OF ALTERNATIVE ANALYSES -

Several objections can be raised against my proposal. One could propose that the gerund morphology is transparent to the aspect type of the predicate. The atelic reading in (6) could be the effect of a pragmatic operator C_{eh} of the kind proposed in De Swart (1998) that shifts the type of gerund clauses in the appropriate contexts, which by definition are those in which there is a semantic conflict between the semantic type of the functor and the one of the argument. I will briefly discuss two kinds of arguments against this

approach. First, I shall draw evidence from the gerund – infinitive opposition in the context of perception verbs in the main clause as in sentence (22).

- (22) a. Juan vió a Pedro limpiar el auto en cinco minutos.
Juan saw to Pedro clean the car in five minutes
'Juan saw Pedro clean the car in five minutes'
- b.(?) Juan lo vió a Pedro limpiando el auto en cinco minutos.
Juan him-ACC saw to Pedro cleaning the car in five minutes
'Juan saw him cleaning the car in five minutes'

Sentence (22a) asserts that the main verb's Actor perceived the entire process of cleaning the car described by the infinitive clause. In contrast, the gerund event in (22b) does not entail completion: the Actor of the main verb perceived part of the process of cleaning the car. Indeed, some speakers find (22b) unacceptable presumably because they cannot coerce the interpretation of the adverbial phrase into an 'intensional' reading; namely, a reading where the 'cleaning in five minutes' is interpreted in a possible world whereas the actual world only contains part of this event.

As (22a) shows, perception verbs are compatible with telic readings; hence, there is no intrinsic semantic conflict between perception verbs and their verbal complements. Thus, the presence of a coercion operator in the case of gerundial phrases is not grounded; it seems that the gerund morphology effects the type shifting.

The second piece of evidence comes from the contrast between gerund and infinitive forms regarding aspectual verbs.

- (23) a. Juan empezó a escribir un cuento.
Juan started to write a poem
'Juan started to write a poem'
- b. Juan empezó escribiendo un cuento.
Juan began writing a short-story

‘Juan began by writing a short story’

The aspectual verb in (23a) takes the initial part of the event in the infinitive clause as part of the assertion. On the contrary, *empezó* ‘start’ cannot take the initial part of the event in the gerund clause; it takes e_G as the initial part of an implicit sequence of events of which the gerund denotes the first one (for example, a sequence where Juan enrolled in the army later and ended selling used books in a library). This contrast derives from the fact that atelic forms –such as the gerund- are inherently unbounded; therefore, it is not possible to define final or initial parts on them as it is the case with infinitive forms.

The evidence presented so far seems strong enough to conclude that the imperfectivity associated with gerund phrase is inherent to the semantic of the gerund morphology rather than pragmatically driven.

The second concern that could be raised against my description derives from the intuition that the operator PROG corresponding to the progressive form is able to capture the meaning of the gerund morphology since it also shifts the type of telic event descriptions into atelic ones. In such case the introduction of a new operator might be seen as redundant.

In short, the progressive determines that an event description is not complete (i.e. [*ed* entails [-completion]]) whereas the gerund determines that an event description does not entail completion (i.e. – [*ed* entails completion]).

The different behavior of the progressive and the gerund regarding the operator MAX and PERF should further support my claim. The MAX operator discussed in Koenig and Muansuwan 2000 sets arbitrary boundaries to an eventuality; consequently,

the event is interpreted as terminated rather than completed (i.e. it sets boundaries also for, for example, activities; which cannot be interpreted as ‘completed’ since they are atelic). It is introduced for example by the preterit in Spanish. In turn, the PERF operator is associated with the perfect morphology; it is in my view aspectually transparent since it does not modify the aspectual property carried by the event description it modifies.

In relation to both forms, the progressive eventuality description is interpreted in (24a) and (24b) as terminated but non-completed.

- (24) a. Juan ha estado construyendo una casa en el monte.
 Juan has been building a house on the hill
 ‘Juan has been building a house on the hill’
- b. Juan estuvo construyendo una casa en el monte.
 Juan was-PRET building a house on the hill
 ‘Juan was building a house on the hill’

The interaction of PROG with MAX or PERF does not result in telic event descriptions; the respective events are bounded, but they are still incomplete. Namely, both (24a) and/or (24b) entail that the house was not built. Maximality cannot interact with GER since the gerund does not interact with the Preterit, but perfectivity can illustrate my point. When applied to an event description modified by the Progressive the description turns out to be atelic. In contrast, when applied to a gerund event description the descriptions can be telic as shown below.

- (25) Habiendo construido la casa, Juan duerme más tranquilo.
 Having built the house, Juan sleeps more relaxed
 ‘Having build the house, Juan sleeps more relaxed’

Contrary to what was seen in (24), the only possible interpretation of a perfect gerund description is that of telic. Since PERF is aspectually transparent, this different behavior

of the progressive and the gerund reveals their intrinsic semantics and it is easily derivable from my proposal: the gerund is underspecified and, hence, able to be restated as a telic event description whereas the progressive is atelic.

4. CONCLUSION

In this chapter I have argued that the temporal interpretation of SGC in relation to temporal location can be captured by assigning the gerund's meaning a statement that establishes that the Event Time overlaps the Reference Time of the event description constituted by the gerund. In addition, SGC_C states that the gerund's Reference Time overlaps with the main event's Event Time.

In relation to the aspectual interpretation of SGC, I have argued that can be derived from the aspectual meaning of the gerund form which is associated with an aspectual operator that is vague regarding completion; that is, the events description modified by this operator may or may not denote a subpart of the described event. The aspectual meaning of the gerund contrasts with the one of the Progressive in that the latter necessarily determines that an event description denotes a subpart of an event that may be completed only in a possible world.

CHAPTER VIII

THE SEMANTICS-PRAGMATICS INTERFACE: THE FOCUS STRUCTURE OF SGC

1. INTRODUCTION

One of the central working hypotheses throughout this investigation is that the internal architecture of the Spanish Gerund Construction exhibits a systematic articulation of syntactic, semantic and pragmatic structures. This chapter discusses the role played by the specific configuration of information structure that characterizes the construction in articulating these grammatical domains.

The chapter proceeds as follows. First, I analyze the syntactic realization of the asymmetric semantic relation of SGC_C. For example, it takes verb combinations in SGC_C that denote Part-Whole relations and study their syntactic pattern in order to contrast their expression in SGC_C and in Adverbial Temporal Constructions (ATC). It shows that these constructions map the Whole-Part relation rather differently. In particular, the optional constituent –i.e. the gerund phrase– expresses the Part in SGC_C whereas the Whole in ATC (i.e. the ‘when-clause’). In consequence, SGC_C expresses the Whole in the main clause whereas the Whole is expressed by the adjunct clause in ATC. This apparent contrast in syntactic realization hides a rather identical linking in the semantics-pragmatics interface. In particular, the Whole is associated with the Presupposed material and the Part is associated with the Focus in both constructions. I argue that the different alignments in the pragmatic-syntax interface is expected since the embedding in both

constructions is different; the embedded phrase in ATC is an adjunct clause whereas in SGC_C is a phrasal complement of the main verb.

The description above presupposes that grammatical constructions are associated with characteristics Focus configurations. I argue that simple sentences have a specific Focus-structure configuration. Contrary to for example cleft sentences, where the form has a rather fixed Focus configuration, simple sentences are more flexible in Focus selection but the choice of Focus is entirely unconstrained; in restricted Focus configuration it is determined by a semantic ranking of constituents.

In particular, I propose that given a pair of constituents of a *simple* sentence (one that does not contain more than one clause), the constituent that does not satisfy a lexical requirements (semantic adjunct) is the default Focus as opposed to the one that is lexical required. In any sentence that is not marked for a particular Focus configuration and contains an optional (adjunct) constituent, this element is to be the unmarked Focus of the construction over syntactic arguments. This is certainly true of the gerund phrase in SGC_C.

The main contribution of this chapter to our understanding of SGC_C is to show the link between the lexical encoding of Means (or Manner in the sense of Talmy 1985) in Spanish and the information structure configuration that characterizes SGC_C. I show that the Means of a motion event in Spanish is an implicature from the type of participant and the type of event involved and that the overt expression of Means is only acceptable if it cancels the implicature. As a result, Means becomes the most important information conveyed by the sentence. I use Horn's R-implicatures as a subtype of Levinson's I-

implicatures to describe the specific inference pattern by which Means turns into an implicature.

I also show in this chapter that information structure plays a role in determining the realization of temporal structure and its interpretation. The temporal interpretation of both constructions involves an asymmetry of intervals; one of the event intervals functions as ‘Topic Time’ (or ‘framing interval’) and the other functions as ‘framed interval’. It is shown that information structure is also systematically related to this distinction.

Finally, I claim that the difference between Spanish and English is not that the two languages encode Manner –in the sense of Talmy 1985- differently; rather, the concept of Manner itself is different for the two languages. Manner is a mereological relation between events in Spanish but it is a relation between entities in English.

2. THE SYNTAX-SEMANTICS INTERFACE: THE REALIZATION OF PART-WHOLE RELATIONS

A central property of the Spanish Gerund Construction emerges if we look closely at the expression of the Means relation. As described in chapter V, the meaning $SGC_{C-MEANS}$ involves an overlap of two events described by asymmetric event descriptions; this asymmetry was characterized in terms of information load. For the sake of simplicity, let me refer to that asymmetric overlap in terms of a subcase of it, a Part-Whole relation with the proviso that there is a systematic relation such that the Whole corresponds to the less informative event description whereas the Part corresponds to the less informative one.

There is only one possible syntax-semantics mapping in which the subtype $SGC_{C-MEANS}$ expresses its meaning. The event that functions as Whole needs to be linked to the main clause and the event that functions as Part needs to be linked to the optional gerund phrase. Sentence ‘a’ below illustrates the only admissible linking whereas ‘b’ shows that the reverse linking is anomalous. The explanation is that the Whole –the singing event- needs to be expressed in the main clause whereas the Part- the screaming event- needs to be linked to the embedded clause.

- (1) a. Juan canta gritando.
 Juan sings screaming
 ‘Juan screams when he sings’
- b. # Juan grita cantando.³⁰
 Juan screams singing
 ‘Juan screams when he sings’

Sentence (1a) is an instance of the subtype $SGC_{C-MEANS}$. It satisfies the CiS constraint since the same individual performs both events under the same circumstance. Moreover, the two verbs belong to the same semantic class; namely, they denote sound emission events and, hence, they not only have overlapping intervals but they also share a relation (i.e. an Actor, a sound and the emission relation). These properties satisfy the constraints that were required for event overlapping. Further, the verb *gritar* ‘scream’ denotes the emission of a vocal sound, which is characterized as ‘high’ along a scale of loudness. The verb *cantar* ‘sing’ characterizes also the emission of a vocal sound and it adds the following constraint: the sounds (re)produce a melody (a sound pattern of some sort) and it is a verbal act, it presupposes the presence of verbal piece (i.e. lyric).

³⁰ The ‘#’ symbol means semantic anomaly by which it is understood that the sentence makes no-sense in a normal context (it might be possible to imagine a context for it, but it would be very rich in information). In a normal context sentence ‘b’ would mean that the Actor screams so nice that he sings, which normally doesn’t make sense.

I would like to clarify in which sense the screaming event description is more informative than the singing event. $SGC_{C-MEANS}$ determines that the screaming event and the singing event overlap. The subevent that they share, e_s , is basically restricted to the sound emission event. Regarding the specific subpart shared by the singing and screaming events –namely, the sound emission- the screaming event description tells us about the quality of the sound, for this specific subevent is more informative since it qualifies a sound that is unqualified in the singing event description.

The singing event description focuses on qualifying the final result. The two event descriptions have different information load and, hence, are asymmetric. Intuitively, the singing is a Whole for the screaming event because the shared subevent e_s is part of a non-homogeneous structure in singing (i.e. it is a qualified subpart in the sense of chapter IV) whereas screaming is just a homogeneous event such that e_s functions as an arbitrary subpart.

Event overlapping and asymmetry are the two constraints that characterize the ‘partial identity’ relation, required of $SGC_{C-MEANS}$ construct. Sentence (1) is an instance of $SGC_{C-MEANS}$ where the singing event functions as a whole that takes the screaming event as a part of it.

Example (1b) expresses the same semantics than (1a) but here the Part is linked to the main clause whereas the Whole is linked to the gerund phrase. The semantic anomaly of (1b) contrasts with the well-formedness of (1a); this contrast shows that the mapping ‘Part-gerund phrase’ and ‘Whole-main clause’ is obligatory.

The question is whether this configuration is a specific convention imposed by $SGC_{C-MEANS}$ or rather is a cross-constructual pattern. In order to answer this question I

will compare $SGC_{C-MEANS}$ and the Adverbial Temporal Construction (ATC). At a certain descriptive level, both constructions have comparable semantics since, even if ATC does not encode Part-Whole relations, it can eventually express them. This can be seen in sentences (2a) and (2b), which are instances of ATC_{WHEN} semantically comparable to (1a) and (1b) above.

- (2) a. Juan grita cuando canta.
 Juan screams when sings
 ‘Juan scream when he sings’
- b. #Juan canta cuando grita.
 Juan sings when scream-PRES-3sg
 ‘Juan sings when he screams’

Sentences (2a) and (1a) are intended to describe the same event, but they build the representation (event description) differently. The meaning of ATC is merely temporal, it imposes constraints only on the relation between the temporal traces of the event description.

What is important for us here is that the main clause describes the screaming event whereas the optional clause describes the singing event; in contrast, the linking of the whole to the main clause proved to be impossible for SGC_C in (1b). The comparison between $SGC_{C-MEANS}$ and ATC constitutes conclusive evidence against proposing a cross-constructional mapping of Part to optional clauses and Whole to main clauses.

However, I will show that it is not necessarily the case that those mappings need to be seen as different conventions associated with each construction. They are motivated in the difference in information structure between SGC_L and SGC_C ; more precisely, I argue that the link between a Part-Whole semantics and Focus structures.

3. THE FOCUS STRUCTURE OF SGC

Different linguists use categories that correspond to information structures in different ways; therefore, I first make clear in which sense I use categories such as Focus, Presupposition and Assertion. These notions, which derive historically from the concept of Theme (i.e. Topic) and Rheme (i.e. Focus), have received different interpretations since the seminal work of the Prague School. Sentences are conceived as asymmetric structures; one part contributes to the dynamic of discourse by supplying new information –i.e. the Rheme- whereas the other part –i.e. the Theme- articulates the sentence to the previous discourse.

Next to the notion of ‘semantic presupposition’ is the notion of ‘pragmatic presupposition’ (cf. Stalnaker 1974). This category includes every proposition that is taken for granted by speaker and hearer; already present in the ‘common ground’. The common ground is the set of propositions assumed to be believed by speaker and hearer in a conversation. This is a notion of presupposition that goes beyond logical inference and makes it closer to the linguistic notion of old information in the sense of Prince (1981).

Lambrecht (1994) attempts to relate the linguistic and the philosophical tradition and I will take some of the definitions given in his work as the meaning of the pragmatic categories that will be used to describe SGC.

Lambrecht’s definition of Pragmatic Presupposition derives from Stalnaker, but it is constrained to refer to ‘lexico-grammatically evoked’ information; this means that every presupposed proposition needs to be associated with a grammatically encoded element.

Presupposition: The set of propositions lexicographically evoked in a sentence which the speaker assumes the hearer already knows or is ready to take for granted at the time the sentence is uttered. (1994:52)

The nature of presuppositions is made clear by identifying them with the concept of ‘proposition’ (i.e. information content that can be true or false). This choice is meant to differentiate information structure from properties of (discourse) entities such as their degrees of ‘activation’ (Prince 1981). In addition, the incorporation of the mental state of the hearer into the definition emulates the broadening effect that the notion of ‘common ground’ had on the notion of ‘old information’ by allowing it to be present several domains such as the preceding discourse, the deictic context, and/or world knowledge. It should also be noticed that the concept of truth plays its role in the definition; the use of the verbs ‘know’ and ‘take for granted’ necessarily conveys the notion of truth.³¹

In turn, Pragmatic assertion is defined in the following terms:

The proposition that the hearer is expected to know or take for granted as a result of hearing the sentence uttered. (1994: 52)

This means that the assertion involves all the content of a sentence that is assumed to be unknown by the hearer (i.e. absent in the ‘common ground’). However, this definition does not make clear the relational nature of assertions, which Lambrecht takes as a fundamental component of it. The assertion is not about a discourse entity; instead, it is the proposition that relates that discourse entity to the presupposition. The semantic content that it is related to the presupposed information is the Focus:

FOCUS: The semantic component of a pragmatically structured proposition whereby the assertion differs from the presupposition. (1994: 213)

³¹ Dryer (1996) specifically criticizes this aspect of Lambrecht’s definition of information structure since the hearer may have a proposition activated without necessarily believing that it is true or false. The status of a proposition regarding its information status is entirely independent of its truth-value.

This model aims at articulating the notion of assertion and Focus such that they are seen as different but systematically related. The focus is the semantic component of the assertion; the assertion is the overall proposition that relates that semantic component to the presupposed information. Notice that the assertion is the proposition that present new information in a sentence, namely that information that is in the hearer's mind as a consequence of the utterance. This resembles the insight in Jespersen 1924 and Akmajian 1973 about the fact that new information may not be in the predicate nor in the subject – which may be both old- but rather in the relation between them.

The encoding of information structure in grammatical forms constitutes the problem of 'focus marking'; namely, the realization of 'focus structure' (i.e. the conventional association of focus with grammatical forms (cf. p. 222)).³² These interactions fall into a number of fixed 'types': predicate-focus; argument-focus; and sentence-focus structures. The nomenclature is sufficiently clear as to express that they denote a focus meaning expressed by the predicate, any specific argument, and the entire sentence, respectively.

4. THE INFORMATION STRUCTURE OF SGC_C AND ATC

This section uses a number of tests to reveal the Focus structure of SGC_C, SGC_A and ATC. I assume that constructions have a specific Focus-marking structure. In particular, I will show later that each of these grammatical structures is not indifferent to

³² It is important to keep in mind that the way in which Lambrecht sets the issue is kind of the reverse order that we could have expected. That is, rather than looking at linguistic forms and arguing that in order to explain their properties we need to postulate this and that categories, the author talks about the 'realization' of information structure into forms.

the choice of one or the other of their constituents as Focus in an ‘argument-Focus’ structure.

My analysis relies on a number of test involving so-called ‘focus-sensitive’ operators as legitimate sources for determining the information structure of a sentence. Lambrecht (1994) proposes that Sentence Focus and Argument-Focus are different information structure types. The first type arises in a context where all the information conveyed by a sentence is new; this configuration is usually illustrated by answers to questions of the type ‘what happened?’; in contrast, in ‘argument-Focus’ sentences a single constituent is selected as the Focus. Grammatically, any major phrase inside a sentence can be selected as Focus. However, I argue that some choices of the focused constituent in a sentence that does not uniquely encode a single focus structure can be more marked than others. For example, the unmarked Focus element is targeted by Focus-sensitive operators; it is well-known that negation has scope over the Focus constituent (which will be marked by small capital letters, this also marks the constituent that receive intonational-stress according to the usual convention). This is illustrated by the sentence (3).

- (3) Juan no entró a su oficina CORRIENDO.
Juan not entered to his office running
‘Juan did not run into his office’

There are two logically possible interpretation of this sentence; in one Juan did enter his office but he did not run into it; in the other Juan ran but he did not enter. However, the second is not possible with the intonation pattern of (3); namely, the intonation where the sentence stress falls in the gerund.

These interpretations arise from the two possible scopes of the negative adverbs in terms of internal or external negation. The external negation reading is less likely to be the case if there is no other explicit information that favors or requires it (such as ‘in fact, he did not even come’). It is most likely that the negative adverb has an internal reading; namely that the event e_M described by the main clause took place whereas the event e_G denoted by the gerund clause did not.

The intonation pattern in (3) is the unmarked one in Spanish (postverbal sentence stress), which indicates that the gerund clause is Focus whereas the main clause is part of the Presupposition. In Lambrecht’s system this presupposition is represented as an open proposition of the form ‘Juan entered his office x [Manner]’; the instantiation of this variable by the gerund event constitutes the Assertion. The ‘lie’ test on Presuppositions (Goldberg and Ackerman 2001 quoting Lappin 1979) confirms our description; that is, if we uttered ‘that’s a lie!’ upon hearing the statement in (3), the target of our accusation can only be the negative adverb and its scope, namely, the gerund clause.

The same focus structure obtains if event quantifiers are used as a test for Focus structure since they are also Focus sensitive.

- (4) Juan siempre entra a su oficina CORRIENDO.
 Juan always enter-3sg to his office running
 ‘Juan always runs into his office’

The interpretation of the universal event quantifier *siempre* ‘always’ contains a Restriction and a Scope, which are assumed to coincide respectively with Presupposition and Focus. The quantifier has universal scope over the Restriction but it does not have universal force over its Scope. In (4) every member of the set of Juan-entering events is asserted to cooccur with a Juan-running event; there may be, though, many Juan-running

events that do not cooccur with Juan-entering events. Therefore, we can infer that the gerund phrase is the Focus and the main clause is the presupposition of the sentence. The structure takes the form represented in (5).

(5) *siempre* [RESTRICTION (every) entering event] [SCOPE (some) running events]

Thus, negation and quantification show that the gerund phrase is the default FOCUS in SGC_C. The same tests prove that ATC has a different linkage of information structure into syntax; let's first check the behavior of ATC regarding negation.

(6) Juan no GRITA cuando canta.
 Juan not screams when sings
 'Juan does not scream when he sings'

Sentence (6) states that the event of singing does not involve any screaming event. That is, the negative operator only negates the main clause. This behavior can be predicted if the when-clause is part of the Presupposition and the main clause is part of the Assertion. The event quantifier *siempre* confirms this hypothesis about the information structure of ATC as shown in (7).

(7) Juan siempre GRITA cuando canta.
 Juan always screams when sings
 'Juan always screams when he sings'

This sentence means that every event of singing overlaps with a screaming event; but there might be screaming events that do not overlap with singing events. The event in the when-clause is taken in its universal extension, therefore part of the Restriction and, hence, also part of the Presupposition; in contrast, the event in the main clause is not necessarily taken universally, it is part of the Scope of the quantifier and, thus, the Focus of the sentence.

(8) *siempre* [RESTRICTION (every) singing event] [SCOPE (some) screaming events]

Therefore, ATC maps the information structure categories of Presupposition and Focus to embedded adjunct clause and main clause, respectively. SGC_C shows, on the other hand, the opposite mapping since it assigns Focus status to the gerundial phrase and the Presupposition status to the main clause. Therefore, there is no ground to posit a cross-construction mapping of information structure into syntax. At the level of description that has been proposed, the correlation seems to be a matter of specific conventions associated with each construction.

SGC_A has the information structure properties of ATC_{WHEN} as can be seen in sentence (9) below.

- (9) Abandonando a sus viejos compañeros, algunos diputados no se escindieron del bloque.
 Abandoning to their old comrades, some of the representatives not REF left from-the party
 ‘Abandoning their old comrades, some of the representatives did not leave the party’

In this sentence the negative operator has only scope over the main clause. The event expressed by the gerund clause is assumed to have taken place whereas it is asserted that the event in the main clause did not occur. This suggests that the main clause is Focus whereas the gerund clause is part of the Presuppositions of the sentence, which is what we expect if ATC and SGC_A have the same mapping to information structure. The same case can be made by looking at the behavior of the gerund clause regarding the interpretation of quantifiers.

- (10) Abandonando a sus viejos compañeros, algunos diputados siempre se escindieron del bloque.
 Abandoning to their old comrades, some of the representatives left from-the party
 ‘Abandoning their old comrades, some of the representatives left the party’

Sentence (10) says that every event e_G was followed by an event e_M . The event description in the gerund clause is taken universally whereas the event description in the

gerund clause may describe event tokens that are not included in the assertion in (10). That is, there might have been events of leaving the party that were not the consequence of abandoning comrades.

(11) *siempre* [RESTRICTION (every) abandoning event] [SCOPE (some) leaving events]

To sum up, this section has shown so far that SGC_C and, on the other hand, SGC_A and ATC represents different mapping of information structure into syntax: the main clause is FOCUS in the second case.

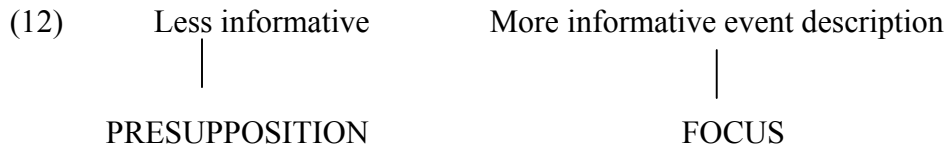
I will show next that, in fact, there is a cross-constructional pattern that motivates the different realization of semantic information into syntactic structures. Information structure is by definition asymmetric since it is defined in terms of the relation between two different categories -FOCUS and Presupposition- that are assigned to different constituents. It was shown in Chapter IV that SGC_C is semantically asymmetric also since one event description needs to be more informative than the other *-in relation to the subevent they share-* and these are not commutative roles.

Interestingly enough, the linking of the contrast between More informative and Less informative semantic descriptions and syntactic structure is fixed in SGC_C since the gerund expresses the More informative event description and the main clause the less informative one.

In relation to information structure, this pattern means that the less informative constituent is the Presupposition and the more informative one the FOCUS. This semantics-information structure linking is precisely what remains constant in our cross-constructional analysis; in ATC the less Informative description is linked to the Presupposition and the more informative to the FOCUS. If we assume that it is the

pragmatic-semantics linking what needs to be maintained, we can motivate the different realization of the same semantic information into different syntax in SGC_C and ATC.

Both SGC_C and ATC correlate the pragmatic category of FOCUS with the semantically more informative description and the pragmatic notion of Presupposition with the semantically less informative description. This is schematically shown below.



We can conclude, then, that the realization of the Part-Whole relation into opposite syntactic structures need not be an arbitrary convention that is decided on a construction-by-construction base, but it is rather motivated in a systematic correlation of an asymmetric semantic structure and an asymmetric syntax. Later I will also show how this pattern affects also the temporal interpretation of the construction.

5. A FOCUS HIERARCHY

I have claimed that constructions come with a typical, unmarked information structure marking. This is not an uncontroversial point; for example, Lambrecht assumes that the marking of Focus structure is rather conventional. Aside from structures that are specifically constructed to express a Focus structure configuration (e.g. cleft sentences), each sentence is associated with different allo-sentences, each one representing a particular Focus-marking type; the most felicitous choice is determined by context. The construction itself, unless specifically designed for pragmatic purposes, does not possess any decisive factor for the choice of a particular Focus structure type.

There is no doubt about the role of context in determining the Focus structure type of a sentence. The answer to the question ‘what happened?’ will have a sentence-focus structure irrespective of any constraint imposed by its own internal structure. In contrast, to the question ‘What did John find?’ one can answer ‘John found a RING’; here the Focus is only the direct object since this is the only information the hearer does not yet know.

It is difficult to apply the question strategy to our construction. For example, the sentence below can only serve as an answer to the question like *¿Qué hace Juan gritando?* ‘What does Juan do when he screams?’, which is rather odd.

- (13) Juan CANTA gritando.
 Juan sings screaming
 ‘Juan sings when he screams’

This sentence is an allo-sentence of (1a) in which the main verb is the FOCUS in an argument-Focus structure. But the question that is supposed to trigger this allo-sentence is very awkward at best and it is generally hard to find a context other than a contrastive one that would make this sentence felicitous. It should be stressed that contrastive contexts are themselves marked –they presuppose that there was an assertion that contradicting (13) in the previous linguistic context; for example, (13) would be contrastive in a context where (14) has been previously uttered.

- (14) Juan habla gritando.
 Juan talks screaming
 ‘Juan talks screaming’

Contrary to Lambrecht’s claim not all argument-Focus structures are equally felicitous. The Focus structure in (10) is clearly marked –i.e. it is possible only in a very restricted set of contexts- whereas the Focus structure in (1) is felicitous in almost all

contexts. Furthermore, the theory of information structure as driven purely by context does not account either for the behavior of negation in (3) and (5) nor for the behavior of the universal quantifier in (4) and (7). There is no need to imagine a special context to obtain the reading where those operators have scope over the gerund clause in SGC_C and over the main clause in ATC; these scope structures are the only accessible readings in a ‘neutral’ context (‘neutral’ in the sense of Goldberg and Ackerman 2001). Lambrecht’s theory cannot offer any reason for the uncontestable bias of those operators towards a specific constituent.

I propose to capture this bias in terms of a ‘Focus hierarchy’. It is based on the principle that individual constituents do not rank equally regarding their ability to function as FOCUS of the sentence. In particular, this hierarchy of Focus potential shows that adjuncts are more likely to be Focus than arguments.

(15) Focus hierarchy: adjuncts > arguments

In this sense the hierarchy reveals the status of *semantic contents* in relation to Focus structure. Semantic adjuncts typically express information about Time-Place and, in Spanish, Manner; since this information is irrelevant, for it does not identify any relation type in particular, but it is common to every event, it is not part of the meaning encoded in the lexical entry of most verbs. A minimal criterion for encoding lexical information is that this information should be relevant to differentiate this lexical item from others; each individual piece in the lexicon needs to be differentiated and, hence, needs to contain information that distinguishes it from any other piece. I have proposed a criterion for lexical identity, the ‘paradigm principle’ (Paris 2001), which states precisely that; namely, the encoded information in a lexical item is that information playing a role in

distinguishing this item from any other in the lexicon. A more elaborated theory can be found in Koenig, Mauner and Bienvenue (in press) in order to differentiate arguments from adjuncts with the notion of ‘class specificity’; this category operates at a semantic class level to determine that lexical classes encode information that differentiate them from other classes.

The specific semantic encoding of a lexical item has consequences in syntax since only what is semantically encoded can be a syntactic argument. The sentence below is an example that contains temporal adjuncts.

- (16) El jardinero trajo las semillas ayer.
 The gardener brought the seeds yesterday
 ‘The gardener brought the seeds yesterday’

The question is what information is likely to be FOCUS –intuitively, new information- in an argument-Focus structure. I suggest that picking either the gardener or the seeds would automatically trigger the presupposition that a proposition that contradicts (16) was already in the context; that is, it presupposes a contrastive reading.³³ On the contrary, if the focus is *ayer* ‘yesterday’ there is no need to presuppose a contradictory statement. There is nothing unnatural in presupposing the open proposition ‘The gardener brought the seeds x [time]’.

³³ It has been proposed (Roth 1996) that every Focus structure has a contrastive *semantics* in the sense that it opposes its meaning to every other possible way of filling in the same open proposition. Thus, in the sentence below, its meaning is also related to the number of closed proposition that can be obtained other than the one we have.

(i) a. Bill introduced Mary to JOE.
 b. Bill introduced Mary to x.

Thus, different allo-sentences of the same sentence may differ in meaning because they call for different alternative sets of events. I propose that while Roth’s theory is fundamentally right it misses the fact that there are discourse contrastive focus structures. This means that there are allosentences that presuppose an actual refuting proposition in the preceding context. This is a different situation than the contrastive nature of the semantics of Focus structure. It is in this sense that the category ‘contrastive’ is used here.

Examples of argument-Focus structures with manner adverbs as Focus are also apparent. Let's analyze the following sentence.

- (17) El jardinero plantó las semillas torpemente.
The gardener planted the seeds carelessly
'The gardener planted the seeds carelessly'

The hearer understands that the point trying to be made in (13) is about the careless way in which the action was performed. Any other focus selection in the context of an argument-focus structure would require a contrastive context.³⁴

6. ON THE TYPOLOGICAL DIFFERENCE BETWEEN ENGLISH AND SPANISH

The research in Talmy 1985, 2000 has proposed a typology of four types of languages in the expression of Manner relations. Spanish and English represent, respectively, two different categories of this typology; English is a 'satellite-frame' language whereas Spanish is a 'verb-frame' language. In this section I will briefly present the Spanish-English contrast as described in Talmy's work; my purpose is to show the role of the Focus structure in the contrastive encoding.

The English-Spanish contrast can be illustrated by comparing the Spanish sentence in (19) with its English translation.

- (19) Juan entró a su oficina corriendo.
Juan entered to his office running
'Juan ran into his office'

The verb containing information about Motion and Manner of Motion (in our terms Means of Motion) is expressed as a main verb in English; the end of the Path is introduced by a prepositional phrase. In contrast, the Spanish expression of the same

situation introduces Motion and Path in the main verb and Manner of Motion is encoded by an adjunct clause headed by a gerund form. English allows the equivalent of the Spanish pattern (i.e. ‘Juan entered his office running’), but it is certainly not the colloquial form. The Spanish description of the event focuses on the main verb since this introduces all the concepts that are involved in a prototypical Motion event such as Figure, Motion, Path and Ground; the gerund elaborates on this description without introducing a required component. In contrast, English introduces the Ground with the satellite preposition ‘into’ (I assume that the verb ‘run’ introduces a Path here).

Talmy 1985, 2000 proposes that the different strategies for the expression of Manner are ultimately motivated in the different patterns for encoding information into lexical items that characterize both languages. English tends to encode Manner into the meaning of verbs that do not contain Ground. Aske 1989 and, in particular, Slobin 1994, 1995, 2000 have also shown that English contains a much larger set of verbs describing Manner of Motion than Spanish. Spanish is rather scarce regarding the information about the initial part of Motion events whereas English is very generous regarding information about the initial part of the event. I should stress that the claim is about the relative number of Manner verbs rather the total absence of them in Spanish. For example, English has verbs that encode the Ground but most of them happen to be Latinate (i.e. ‘enter’); also, Spanish has a large number of Manner of Motion verbs but they are a small set compared with the English counterpart.

³⁴ Notice that changing the noun phrases in subject and object position from definite to indefinite would not

6.1. CASE STUDIES ON LEXICALIZATION: *entrar* ('enter') and *tirar* ('throw')

I consider that *entrar* contain a (detachable) Path in its meaning. Its Latinate counterpart in English, the verb 'enter', has also a Path, but the verb itself does not belong to the repertoire of words that are accessed by English speakers in their everyday oral engagements. For the Spanish version, the Path becomes apparent in the analysis of the meaning of *entrar* in isolation as it is used in (20).

- (20) Juan entró a su oficina.
Juan entered to his office
'Juan entered his office'

The meaning of (20) is determined by the entailments associated with (every sentence that is headed by) the verb *entrar* as listed in (21) below.

- (21) 'i' There is an event e_M ,
'ii' There is a Path in e_M
'iii' There is a participant x (i.e. Juan or Figure) in e_M
'iv' There is a motion relation between the Figure and the Path in e_M
'v' The Path ends in an enclosed space (bounded Path).
'vi' such that there is a change of state:
 a. The Figure is in state s_M at t_S .
 b. In s_M the Figure is located at the end of the Path at time t_S .
 c. At t_{S-1} the Figure is not located at the end of the Path.
'vii' The interval t_{S-1} overlaps with the interval t_E of e_M .
'viii' There is an event e that contains e_M and s_M as proper parts.

These entailments introduce three entities; the entity that moves is *Juan*; the spatial entity at the end of a Path is expressed by *su oficina*, which further satisfies the selectional restriction 'spatial enclosure' imposed by the verb; and the Path is expressed by the preposition *a*. There should not be any doubt about the presence of a Path given that only in those cases *a* can be use in spatial contexts.

carry any different effect regarding focus structure in the case of (12) and (13).

In contrast, the English tendency to encode lexically information about the initial part of the event can be seen by contrasting the causative verb ‘throw’ with its Spanish counterpart *tirar*. The basic structural aspects of their semantics and argument structures are rather identical for both verbs; they both roughly mean ‘something causes something else to move to a Goal/ in the direction to a Goal’. They are used below in sentences that are equivalent.

(22) a. John threw the ball into the river.

b. John tiró la pelota al río.
 John trew the ball to-the river
 ‘John trew the ball to the river’

The relevant entailments of the English sentence above are listed below.

- (23) (i) An animated entity Th_1 (Actor) causes an Event e_2 .
 (ii) The Actor uses its hand/s to hold an entity Th_2 (Theme or Figure).
 (iii) The arm is twisted up and, hence, the palm of the hand is not facing the Actor while holding Th_2 (otherwise, the right verb would be ‘toss’)
 (iv) The Actor exerts a propelling force on the Theme/Figure.
 (v) This action causes Event e_2 which changes the location of the Theme.
 (vi) The Figure follows a Path that ends at a place Th_3 (Goal).
 (vii) At some point –its initial part- the Path does not have any contact with the ground.

There are several of those entailments that are absent in the Spanish equivalent (22‘i’). In particular, entailment (23‘ii’) and (23‘iii’) are not part of the meaning of sentence (22‘ii’) because they are not part of the meaning of the verb *tirar*. The Spanish verb does not require the causing event to involve hands; it can be performed by kicking the ball, pushing it with a shoulder, etc. The English verb is richer in the sense of specifying a number of requirements that are absent in its Spanish counterpart.

This example shows that English is more specific regarding the initial part of Motion events even in relation to causative verbs involving motion. As expected, the lexical limitations are complemented via syntactic means; hence, the Information that is lexically absent is supplied by adding an adjunct clause describing the initial part of the main event. This is true for both Spanish and English. Spanish has the Spanish Gerund Construction, in which the information lexically absent is provided by the gerund clause. In English, satellite prepositions but also the resultative construction are means to specify information that pertains to the last part of motion events. This is represented by the examples in (24).

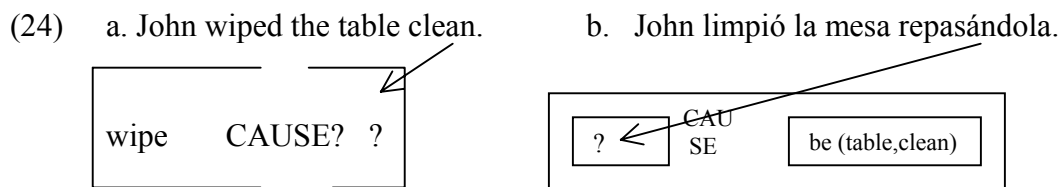


Figure 1

The resultative construction in English reflects the tendency in this language of expressing information about the final stage of an event by syntactic means rather than encoding lexically this information. In contrast, the Spanish equivalent of (24) reflects the tendency in this language of encoding lexically information about the final stage of an event but expressing syntactically (e.g. through combinatory structures) information about the beginning of this event.

In the following section I would like to explore other dimensions of the different strategies for encoding Manner information.

6.2. LEXICAL MEANING AND SYNTACTICALLY VISIBLE MEANING

In spite of the fact that *entrar* and ‘enter’ are associated with the statements in (19), they are not typically analyzed as encoding Manner -nor even a Path- in a relevant sense. For example, semantic descriptions of the verb in terms of an aspectual calculus analysis (Dowty, 1981; VanValin and LaPolla, 1997) obviate the presence of Path or Motion in ‘enter’, which is analyzed as an accomplishment verb denoting a change of state; VanValin and LaPolla 1997 presents the following lexical entry for ‘enter’.

(25) BECOME (be-at’ (x, y))

Formally, BECOME is an operator that ranges over states (such as the predicate **be-at’**). This description of the verb does constitute the meaning of the verb but its ‘Logical Structure’, which represents the syntactically relevant aspects of the meaning of a word (a verb in our case). In practical terms, only the information that determines the properties of the clause centered on the verb is relevant.³⁵ Van Valin and LaPolla (1997) presupposes that the meaning of the verb is larger but this portion is irrelevant for linking purposes.

However, the information contained in the LS is not enough for the characterization of SGC_C is larger; it demands a larger semantic representation. No matter how specific a verb is –namely, how much information gives about the event type it describes-, there are always alternative ways to perform it and these alternative ways constitute each a Manner or Means of an Event. For example, the verb ‘throw’ in English seems to be highly loaded with information, but still it can be executed in alternative

³⁵ This should include the number of syntactic arguments, Macrorole assignment, reflexivization and all syntactic processes that shows semantic/pragmatic effects in one way or the other (passives, scope relations). Thus, the logical form gives us the semantic information that serves as a skeleton to which no more information can be added (although, it can be removed).

ways, for example, the Actor could stay still or s/he could be running as part of the throwing event to take transmit the energy of the running to the moving object.

Manner is, like Time and Space, a feature that is intrinsic to every single event description. Manner and Means could be understood as features or attributes in the semantic representation of every verb. They inherited from the highest node dominating verb forms. I have argued that the attribute has a typical value in relation to the Actor that performs the event. One possible way of modeling this knowledge is by adding a set of parameters that take into account the type of entity performing the event (e.g. ANIMATE, THING) and each of them would be linked to a prototypical event value (e.g. WALKING). This representation would model the Spanish way of thinking about Manner in general. English verbs tends to have this information encoded in the verb such that the understanding of ‘walk’ does not require to think about the prototype way of Motion since it is a way of Motion itself. Thus, the attribute CIRC seems to be useless in English.

Therefore, the representation of the meaning of *entrar* and ‘enter’ should be described in two levels of representations (maybe, two ‘tiars’ in the sense of Jackendoff 1990) or some other representational device that can capture the fact that the entailments associated with the verb are not encoded on an equal basis. Some entailments are more relevant than others because they determined the syntactic environment in which the verb can be grammatically used. This is what the Logical Structure in (25) represents.

There is a criterion that selects some entailments and gives them special status based on their role on linking. There is also another criterion operating on the meaning of verbs by selecting some entailments over others and giving them special status. I have

called it ‘paradigm principle’ due to the fact that is determined by the organization of the lexicon. That is, verbs are part of the lexicon; this is a linguistic fact that has nothing to do with the outside world (the event) as described by the entailments. In the lexicon, verbs belong to verb classes and receive by inheritance all the information that characterized the verb class they belong to. This inherited or shared information is part of the entailments contained in the meaning of the verb but are less relevant than the specific entailment(s) that determine the characteristic or differential meaning of the verb. This differential entailment distinguishes this verb from any other verb in the lexicon.

The verb *entrar* ‘enter’ is a Motion verb; further, it is a Translational Motion verb and, hence, it contains a Path and a Figure. It is also a bounded Path verb (i.e. a telic verb). The characteristic property of *entrar* is that there is a final state in which the Figure is within an enclosure. This is the ‘differential’ entailment of the verb and it is apparent that nor Path or the Manner are necessarily mentioned in the differential entailment.

Following Van Valin and LaPolla (1997) – which in turn follows Jolly (1991,1993)- we can distinguish three kinds of prepositions regarding their semantic contribution: predicative prepositions, argument-marking prepositions and argument-adjunct prepositions. Predicative prepositions are typical adjuncts that semantically modify the logical structure of the verb. In contrast, argument-marking prepositions express an argument of the logical structure of the main verb (e.g. the preposition ‘to’ in the expression of the Beneficiary argument of ‘give’). Argument-adjunct prepositions are optional constituents but, if expressed, they modify they introduce an argument and may even alter the event type of the verb semantics. Thus, the verb ‘run’ does not have a closed Path in its logical structure but the preposition ‘to’ can introduce one and shift the

event type of the verb from an activity to an accomplishment ('He run to the store'). Also, verbs like 'put' or 'place' are accomplishment verbs that include each a locative state (i.e. **be-at**) and, hence, a Place/Goal argument; at the same time, they both allow a number of prepositions to express it (i.e. 'on', 'in', 'under', 'next-to', etc.). These prepositions are informative (thus, predicative) but since they express an underspecified argument position in the logical structure of the verb, they are considered argument-adjunct prepositions.

How does the *a* of *entrar* fit in this typology? The logical structure in (25) contains the argument expressed by the preposition. The question is if it is an argument-marking or an argument-adjunct preposition. The first option would indicate that the Path is part of the verb meaning; the second option instead would suggest that it is incorporated by the preposition itself.

Certainly, there are examples where the preposition *en* 'in' can express the argument of *entrar*, which is interpreted by the preposition as a merely locative argument rather than a endpoint of the Path, such as in (26).

- (26) María entró en el banco.
 María entered in the bank
 'María got a job at the bank'

I will argue, though, that this is a non-literal use of the verb. It does not denote a physical event since the Actor is inside the bank in a figurative sense; literally, she is a member/part of an institution. In fact, for most speakers a spatial use of *entrar* does not license *en*: **Juan entró en su oficina solo* ('Juan entered (*in) his office alone'). In consequence, the use of *en* does not undermine the claim about a Path in the meaning of the verb.

Further, *entrar* can be used as an aspectual verb, it takes infinitive clauses as illustrated by (27).

- (27) El estudiante entró a bostezar en el medio de mi clase.
The student entered to yawn in the middle of my class
'The student started to yawn in the middle of my class'

The aspectual use of the verb denotes the onset of the infinitive event. This would make *entrar* and *empezar a* 'start to' synonymous. However, there is an interesting difference; *entrar* entails the event denoted by its complement extends beyond the onset; in contrast, *empezar a* does not have such a requirement.

- (28) a. Juan empezó a escribir una novella que no continuó.
Juan started to write a novel that no continued
'Juan started to write a novel that he didn't continue'
- b. Juan entró a escribir una novela (#que no continuó) (atrás de la otra)
Juan entered to write a novel (that not continue) (after of the other)
'Juan started to write a novel (that he didn't continue) (after another)'

As an aspectual verb *entrar* not only introduces the onset of an event but also an extended temporal interval associated to that event; hence, the notion of Path seems to be present in the aspectual construction also.

In addition, there is also a causative use of this verb as it is illustrated by sentence (29).

- (29) María entró su bicicleta al garaje.
María entered her bicycle to-the garage
'María brought her bicycle into the garage'

This sentence states that there is an entity –i.e. an Effector- that performed an action causing the event described by the intransitive *entrar* –namely, the event containing a Figure moving along a Path and ending at a Goal-. Thus, this verb follows the typical English pattern of causative alternation since the basic form is intransitive and the

derived one is transitive and causative; most Spanish verbs have rather the causative as basic and derived the intransitive by adding the clitic *se*.

Does this use of the verb contain a Path? From a pure logical perspective, the causative verb entails the movement of the bicycle. The question is grammatical, though; namely, does the verb encode that Path in its lexical entry? The preposition *a* ‘to’ is required; *en* ‘in’ is not an option for the causative *entrar*; then, I conclude that the Path is actually encoded and *a* is an argument-marking preposition. .

There is a special sense of *entrar* that focuses on the final state. It is best translated as ‘fit’ since it is typically used to denote the fitting of cloth, although not restricted to it as shown in (30).

- (30) El barril entra en el baúl.
The barrel enter in the trunk
‘The barrel fit in the trunk’

In certain context, the sentence above may not entail a Path. For example, somebody else put the barrel into the trunk and then I can come and utter (26) with surprise. In such case, I am just describing a state; however, it seems unlikely to use this verb to describe such situation if there was no presupposition that the barrel moved/was moved into the trunk. For this reason I believe that this is a ‘medio-passive’ use of the verb and, hence, it derives from the causative *entrar*. The Path may be detachable, but the verb entails it.

In conclusion, I have examined several uses of the verb *entrar* and found that there is evidence of the presence of a Path in every case it co-occurs with the proposition *a*; in addition, the subset of cases where the verb co-occurs with the locative preposition *en* are semantically restricted and, still, they seem to presuppose a Path.

7. SOLVING THE PUZZLE: THE INFERENTIAL STATUS OF MANNER IN SPANISH

So far I have shown two facts. First, I have argued that GP is the Focus in SGC_C and, in general, that the information carried by it –i.e. Manner- outranks lexically required information for Focus status. Second, I have shown that a verb that instantiates the typical Spanish pattern of encoding Motion does entail a Path, but this is not part of its ‘differential’ entailments nor has any ‘linking relevance’. That is, the semantics associated with a verb should be conceived as a set of hierarchically organized entailments, some of which are more relevant for syntactic purposes, some others because they define the immediate class of the word in the lexicon. Manner and Path in general do not play a role in the type of telic verbs we have just described and that constitute the primary examples used to analyzed SGC_C.

Here, I would like to show that there is a link between those two facts; namely, the Focus status of the gerund phrase in SGC_C and the existence of hierarchies of entailments such that Manner and Path have a secondary status in the meaning of verbs like *entrar* ‘enter’. The link is the fact that Manner of Motion is for such verbs –which represents the salient pattern in Spanish- an implicature. The information that is lexically backgrounded (not part of the salient entailments) is pragmatically foregrounded. In sentence (20), the implicature is that the Manner of Motion is ‘walking’. The premises are that the Figure or moving entity is human, the fact that there is Translational Motion relation and, crucially, that Translational Motion of humans is, by default, walking.

Therefore, given the meaning of the verb and the Actor that performs it, the value of Manner is a default such that if nothing is said to the contrary, it is implicated. Thus, Manner of Motion does not need to be asserted because it is understood anyway; in

consequence, if it is indeed asserted, it constitutes the cancellation of the default implicature and, hence, Manner becomes the Focus of the assertion.

The notion of Focus is intrinsically related to the potential of an expression of being informative in a specific context. An expression is informative in a context if it contains new information; information that was already present or assumed to be present in the context (i.e. mental state of the hearer) is not informative. We can state in more general terms the claim above by saying that the Focal status correspond in general to Circumstances. Why is it so? Namely, why is it that Manner, Time and Space are more informative than phrases that instantiate the arguments of a lexical item? They are not relevant entailments of most verbs and have default values.

The notion of I-implicatures ('information implicatures) in the sense of Levinson 1987 can help us understand the role of Manner/Means and Circumstances in event descriptions and, in consequence, their role in information structure and syntax. Sentences expressing Means entail the respective sentences with non-Means expression as can be seen in (31).

- (31) a. Juan entró a su oficina caminando.
Juan entered to his office walking
'Juan walked into his office'
- b. Juan entró a su oficina.
Juan entered to his office
'Juan entered his office'

Sentence (31a) unilaterally entails sentence (31b); however, the assertion of the weaker statement does not trigger a Q-implicature to the effect that the negation of the stronger one holds.

- (32) Juan entró a su oficina \nRightarrow Juan no entró a su oficina caminando.

Juan entered to his office
'Juan entered his office'

Juan not entered to his office walking
'Juan did not walk into his office'

This proves that the assertion of the weaker statement does not implicate the assertion of the negation of the stronger one as one would expect from relations associated with Q-implicatures. In fact, it is not only the case that the weaker statement does not conversationally implicate the negation of the stronger one but, on the contrary, the weaker implicates the stronger.

- (33) Juan entró a su oficina ⇒ Juan entró a su oficina caminando.
Juan entered to his office Juan entered to his office walking
'Juan entered his office' 'Juan walked into his office'

The more general description (the one that does not make any assertion about Manner) has come to have the semantic value of the more specific one (the one that involves walking as Manner of Motion). The explicit expression of 'walking' on top of 'entering' would constitute a violation of the Relevance Maxim and, hence, it would trigger an R-implicature. In English this is not the case because the typical pattern of lexical encoding of Translational Motion involves Manner; hence, since there is no choice, there is no violation of a Conversational Maxim and no implicature is triggered.

This is so because of the nature of the relation of Means/Manner to the main event: given any event, there is necessarily some way to perform it; further, there are prototypical ways in relation to a specific kind of Actor that performs it. That is, if the speaker is talking about a human entering into a building all the chances are that this person will walk into the room. There is a prototypical Translational Motion for humans and this applies to the entering event also.

Therefore, the expression of Manner is redundant unless it goes against expectations in the sense of canceling out an inference. If this is the case, the Manner information is not predictable and, in consequence, becomes highly informative.

The fact that the weaker or more general statement really means a stronger one resembles the behavior of some lexical items in what Horn (1984) calls autohyponymy. For example, ‘caw’ names a set that includes ‘bulls’ and its complement set, which is also named ‘caw’; in this sense, this word holds an autohyponym relation: ‘caw’ denotes the set that contains the set of caws as a proper subset. The question Horn (1984) is if that item is ambiguous or not. The situation exemplified in (28) is slightly different, though, since the more general notion (*entró* ‘enter’) stands for the more specific one that can be named (*entrar caminando* ‘enter walking’) rather than for the complement of this one (the ways of entering that do not involve walking). This is represented in Figure 2 below.

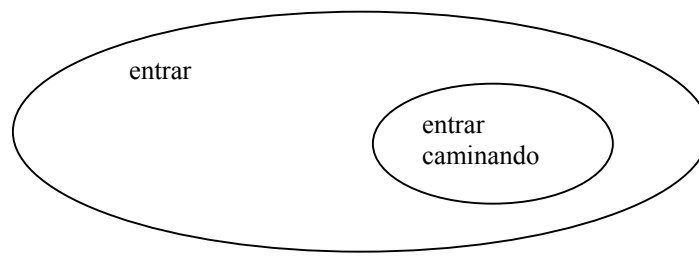


Figure 2

According to (33), *entrar* really means a subset of the entering events, the ones that involve walking and which are defined by the expression *entrar caminando*. In contrast, all the hyponymy cases given in Horn (1984), the weaker term ends up meaning the unnamed complement set of the named subset. The author rightly suggests that this is similar to the blocking phenomenon in Morphology in the sense that the weaker notion tends not to name the more specific one because there is already a name for it. This cannot be the case of SGC_C , since there is already a name for the subset.

The difference should be found in the fact that the Horn's data were lexical items whereas SGC_C is a syntactic construct.

The role arguments and Circumstances play in relation to event type identification and individual event identification, respectively, is also relevant to explain the Focus status of GP in SGC_C. In particular, an argument is a participant of a relation that determines the meaning of a verb class (cf. the concept of 'class specificity' Koenig, Mauner Bienvenue (in press). This means that arguments play a role in that specific relation that is denoted only by its predicate; hence, arguments are central in the distinction of event types in the lexicon. In fact, it should be noticed that as argued in Goldberg and Ackerman 2001 (and Ressick 1997) the relation of the argument in direct object position to its predicate is such that it makes some predicates predictable from their arguments (i.e. 'house' and 'build').³⁶ On the contrary, Circumstances do not play any distinctive role at a semantic class level nor at the individual verb level, but they are crucial for the identification of *individual* events in discourse (Paradigm principle; indexicality). In this latter domain, it is relevant to identify the individual event denoted by a sentence rather than distinguishing event types or classes. Therefore, it follows that Circumstances have more informative value than arguments in discourse.

8. CONCLUSION

In this chapter I have shown that there is a pattern in the semantics-pragmatic interface such that a semantic asymmetric structure containing event descriptions with a different

³⁶ Goldberg and Ackerman (2001) argue that obligatory adjuncts in medio-passive constructions are motivated on pragmatic grounds. The thesis is that the arguments and their predicates are semantically highly integrated. Hence, an utterance that involves just arguments would lack Focus (i.e. new information)

information load in relation to a subevent typically maps the less informative description into Presupposition and the more informative one into Focus. This is consistent with the fact that, as I have argued, SGC_C has a default Focus structure where the less informative event description is conveyed by the constituent that expresses the Focus: the gerund phrase.

I have also shown that the Spanish encoding of semantic information is based on the premise that Means of events are typically inferred from the relation encoded in the verb and the Actor performing the event. This could be seen as an implicature of the kind described as I-implicature (Levinson 1987), which I understand includes R-implicature in the sense of Horn (1984) since a general term takes a more specific meaning by default.

I have further argued that the explicit expression of Means –which is typically done via a gerund phrases- corresponds to the cancellation of the default implicature and, hence, it motivates on semantic grounds the role of default Focus of the gerund phrase.

since arguments are highly predictable and violate a pragmatic principle requiring Focus for every sentence. Ultimately, they propose to derive the Focal requirement from Gricean principles.

CHAPTER IX

CONCLUDING REMARKS

1. ON THE FORMAL DESCRIPTION

This thesis describes in detail of the Spanish Gerund Construction. I have shown that there are formal and semantics reasons to distinguish between two major subtypes of SGC: SGC_C and SGC_A . Formally, SGC_C has been argued to consist of a VP gerund embedded into the main verb VP as a sister to the main verb; that is, the central claim has been that the gerund phrase is a complement of the main verb. This structure is consistent with all the properties that characterize SGC_C :

- (i) Reordering: The gerund phrase can intervene between the verb and (one of) its complements.
- (ii) Extraction: A wh-word expressing a syntactic argument of the gerund can be extracted and placed in a preverbal position in the main clause.
- (iii) Obligatory control: SGC_C is an obligatory control structure in the sense that a syntactic argument of the main verb determines the referential value of the unexpressed subject of the gerund.

None of these properties are true of SGC_A because the gerund in this case heads a clause or a VP that syntactically modifies the main clause; in other words, it is a peripheral clause outside the internal syntactic domain of the main verb.

Furthermore, the stronger syntactic dependency of the gerund phrase on the main clause in SGC_C in relation to SGC_A mirrors their different semantics. SGC_C expresses an internal relation between two events; namely, it relates sub-part(s) of those eventualities;

crucially, the fact that the relation is event internal can motivate the otherwise exceptional status of the gerund phrase that is not lexically required –nor syntactically nor semantically- and that still behaves as a complement. In general, my analysis conclude that phrases that are not part of the meaning lexically encode in a predicate can appear in the Core syntactic domain of this predicate as complement if they are mereologically related to the event described by the main predicate's clause.

In contrast, SGC_A establishes a semantic relation between two events as independent units; it constitutes an external connection between those events to form a larger complex event.

In relation to the extraction property of SGC_C mentioned in 'ii', it has been shown that it is lexically governed in the sense that it is licensed only for a specific set of main verbs. I have suggested that the properties that characterize this set of verbs seem to be intransitivity, Motion and telicity. Those verbs contain an argument that is both an Actor in that it is a self-moving participant and Undergoer in that it changes states (i.e. location).

I have also shown how the properties of SGC_C can be captured in different grammatical frameworks. In RRG, the gerund phrase is represented as a core structure functioning as an adverb within the main verb core; the linking algorithm needs to be updated to describe the linking of core internal adverbial cores. The gerund phrases are like adverbs in that they not part of the Logical Structure of the predicate but are nevertheless expressed within the Core but differ from them in that they introduce a Core with arguments that interact with the arguments of the main Core. In HPSG, the complement status of the gerund VP is captured by having it listed in the DEPS list of the

main verb. Further, given the internal event semantics that characterizes the construction and its obligatory control status, the gerund also appears in the ARG-list of the main verb.

2. ON SEMANTICS

This thesis has shown that the ‘lexicalist criterion’ on event identity allows a proper description of SGC_C by unambiguously identifying two events in the meaning of the construction. The criterion simply states that every verbal predicate is associated with a semantic representation that, together with its arguments, constitute an event description able to single out a portion of the world that no other verb could identify. The criterion is not exempt from counterexamples, but all of them constitute well-known classes (such as ‘perspective sensitive’ verbs or verbs that belong to different social registers).

There can be two relations between the gerund and the main events in SGC : SGC_{C-CIRC} and $SGC_{C-MEANS}$. SGC_{C-CIRC} entails that the two events share a participant and the spatio-temporal circumstance. There are restrictions on the semantic properties of the event being related since the main event description cannot be associated with an individual-level predicate, nor can it be punctual. On the basis of these semantic constraints and a lattice-structure view of the internal organization of events, I have argued that the relation between the events in SGC_{C-CIRC} is more than sharing of a conjunction of individual participants; the connection includes a ‘structure’ in the sense of sharing a relation among the common individuals. It is the same participant in relation to the same spatio-temporal circumstance or, in other words, the main and the gerund events share a specific stage of a participant. I have labeled this connection Circumstance

Sharing (CiS). I have proposed that the concept of CiS is consistent with description of the internal structure of events as a semilattice of parts; in addition, this concept of events as structures of parts allows for a transparent definition of the concept of ‘stage’.

The relation between the events in $SGC_{C-MEANS}$ has been shown to be stronger than the semantics of SGC_{C-CIRC} ; this means that it satisfies CiS but also further constraints. I have proposed that the relation can be characterized as ‘event overlapping’; namely, there is a subevent that is a non-necessary proper part of both, the gerund event e_G and the main event e_M . I have argued that a characterization in these terms is too general, it does not capture the specific meaning of $SGC_{C-MEANS}$. It is not the case that every instance of two events satisfying ‘event overlapping’ can be expressed by $SGC_{C-MEANS}$. Thus, I have shown that ‘event overlapping’ in $SGC_{C-MEANS}$ is associated not only with the sharing of a participant in relation to the same spatio-temporal circumstance but also with the sharing of yet another relation (e.g. Motion or Cause) and an incremental relation between the two events. Furthermore, $SGC_{C-MEANS}$ entails an asymmetric condition imposed to the event descriptions such that the gerund event description is more informative *about the shared subevent* than the main event description.

Finally, the subtype SGC_A has been characterized as requiring a relation between events that satisfy the following conditions: time interval contiguity and event contiguity relations between the main and the gerund events. These two constraints are satisfied by ‘conditional relations’, ‘consequence’ relations and concessive relations (this last one introduced by an explicit conjunction joining the two clauses).

3- ON INFORMATION STRUCTURE

Finally, I discuss the role of information structure in determining a set of asymmetries of SGC_C . I argued that the gerund clause is the Focus of the sentence in unmarked contexts whereas the main clause acts as a presupposition (different Focus-sensitive operators confirmed this description of the information structure in SGC_C).

I have shown that this information structure is consistent with the fact that the Time interval t_M associated with the main event is the ‘Topic Time’ or ‘framing interval’ in that the assertion takes t_M as the evaluation interval: it is asserted that the t_G and t_M overlap along the extension of t_M . In particular, if t_G is larger and, hence, there is no total overlap, the assertion is still true.

Furthermore, the information structure configuration that corresponds to SGC_C is sensitive to the asymmetry in information load between the event descriptions such that the more informative one has to be expressed by the focal gerund phrase and the more informative one by the main clause. More generally, the more informative one coincides with the Focus of the sentence and the less informative with the presupposition. This correlation exceeds SGC_C since ATCs (Adverbial Temporal Constructions) show the same constraints on the semantics-information structure interface in spite of having a different syntax.

Finally, I have attempted to motivate the Focus status of the gerund on semantic grounds by showing that in structures that are not designed to express a specific type of focus configuration –e.g. cleft sentences–, non-lexically required information becomes Focus if expressed.

4- ON THE PROPERTIES OF SPANISH IN THE TYPOLOGY OF MANNER ENCODING

This thesis offers a description of the information structure of SGC_C that can contribute to the understanding of the Spanish way of expressing Manner of Motion within the typology described in Talmy (1985,2000).

I have proposed that Spanish takes Manner (in Talmy's sense; Means in our sense) to be inferable from the semantic characteristics of the shared participant (i.e. Figure-Actor) and the kind of event denoted by the verb. This property can be captured as an 'R-implicature' –which can be seen as a class of 'I-implicatures' in Levinson (1987) sense. This means that an entailment relation between a more specific and a general terms derives in an implicature from the more general to the more specific such that the former one becomes semantically equivalent to the latter due to a prototypical effect.

Therefore, any Motion event performed by a human is understood to be a walking event if it nothing else is said. If a specific Manner (Means) of Motion is expressed, this means that the default implicature has been cancelled and, hence, Manner becomes the default Focus of the sentence.

5- ON FUTURE DIRECTIONS

There are three directions in which this investigation can be naturally expanded; some of them fall within the domain of the gerund construction and some involve an expansion of the data as to cover other constructions and other languages (Romance languages in the first place).

There are two issues central to any analysis of SGC that have not been fully explored in this thesis. The first one is a description of the specific properties of the event

overlapping relation for each verb class. I have argued that event overlapping involves, among other constraints, the sharing of a relation and asymmetry in the information load. It is clear from the analysis of a couple of different verb classes that each verb class satisfies the constraints differently in some respects that have not been made explicit in my thesis. On the same note, it is crucial to have a description of the Means R-implicature for every verb class since it is reasonable to assume that it might be rather different for each verb class. This would amount to an investigation on the meaning of the ‘prototypical’ event for each verb class in relation to typical participant types. If, as I have suggested, verb meanings can represent this ‘default’ information as a set of contextual parameters, the investigation could be defined as the search for the values of those parameters for each verb class.

Another domain that has not been discussed in detail is the specific ways in which speakers take a form such as SGC_A associated with a very abstract meaning and turn this meaning into fully specified semantic relations such as ‘consequence’ or ‘motivation’. I have suggested that it is done by relying on the meaning of the verbs involved (if they are mental states, then the ‘consequence’ relation might be ‘condition’) but this has not been fully addressed in this research and it is a crucial aspect of SGC_A .

Beyond the domain of gerund phrases, a cross-linguistic study that explores the validity of the semantic categories proposed in this thesis for other event relations expressed in comparable syntactic structures in different languages seems a logical sequel of this research.

The first comparison should take gerund phrases in other Romance languages; while researching on SGC I have had the opportunity to consult French, Italian,

Portuguese and Rumanian speakers about their use of gerund phrases in similar contexts. There are clear similarities, but there are also noticeable differences. The first impression one gets is that Spanish allows the expression of a broader range of relations with its gerund construction than other Romance languages.

In the same vein, the semantic categories proposed in this study should be systematically checked against comparable structures in other languages such as ‘serial verb constructions’ and ‘converb constructions’. For example, I have proposed one possible interpretation of ‘event overlapping’; it is still a queer question if this mereological category is instantiated in a different way in other constructions and/or in other languages.

There is also a cross-constructural dimension of this investigation. I have assumed that the monoclausal syntax of the gerund construction in SGC_C represents an instance of a broader pattern in the syntax-semantics interface in which event internal relations can be expressed within a single clause. In other words, the prediction is that the combination of two predicates in an asymmetric structure where one of them is the head of a reduced form (i.e. not a clause but a VP or V) is only possible if the events being described by the predicates are in a mereological relation. A larger project would involve the precise characterization of the specific event mereological relations that are possible in Spanish and the semantics of single-clause sentences that include two predicates.

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